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ABSTRACT

The handbook for special education personnel was written by 18 graduate students culminating a period of intensive work with physically and mentally handicapped adults at workshops operated by the Pennsylvania Association for Retarded Citizens and the Easter Seal Society. The first chapter details the steps from contract procurement to work completion for a sheltered workshop, providing information on workshop organization, time studies, bids, foreman or work supervisor's duties, training procedures, safety, and productivity and reevaluation. Chapter 2 outlines problems in occupational placement and suggests some ways to overcome them. Criteria and methods for evaluating occupational and community living skills are presented in Chapter 3, which also contains vocabulary lists of functional words related to work and to the use of tools. Task analyses, educational and skill prerequisites, and descriptions of 10 job experiences by workshop participants are provided in the fourth chapter. The final chapter describes four additional jobs and the tasks they require. A brief list of information sources concludes the handbook. (MS)

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A TASK ANALYSIS APPROACH to PREVOCATIONAL AND VOCATIONAL TRAINING FOR THE HANDICAPPED

School of Education
DUQUESNE UNIVERSITY

1975

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THE PENNSYLVANIA CONSORTIUM
FOR THE PREPARATION OF
PROFESSIONAL PERSONNEL

A TASK ANALYSIS APPROACH

to

PREVOCATIONAL AND VOCATIONAL TRAINING FOR THE HANDICAPPED

School of Education
DUQUESNE UNIVERSITY

1975

Funding: Pennsylvania Department of Education
P.L. 91-230, Title VI, Part D
EPDA - Part F - Section 553

FOREWARD

For the past several summers, Duquesne University has been privileged to offer an Institute in the area of mental retardation. Such educational endeavors have been made possible under P.L. 91-230, Title VI-D from the Pennsylvania Department of Education, Bureau of Special Education. In addition, funds were awarded for this particular project from the Bureau of Vocational, Technical, and Continuing Education through EPDA, Part F, Section 553. In the summer of 1975, the School of Education was gratified to receive a grant for an Institute concerned with the preparation of teachers engaged in "Prevocational and Vocational Training for the Handicapped."

The program, which was successfully offered for eighteen students, was conducted largely on site at the Pennsylvania Association for Retarded Citizens and the Easter Seal Society workshops in the greater Pittsburgh area. The essential results presented in this report were developed by faculty and students. Hopefully, they will be shared with personnel in the field who have an interest in this important aspect of special education.

The University and the School of Education are most indebted to the professional personnel of the Bureau of Special Education and the Bureau of Vocational, Technical, and Continuing Education of the Pennsylvania Department of Education for their leadership and assistance in the development of the program and to the administrative personnel from the Allegheny

County Chapter of the Pennsylvania Association for Retarded Citizens and the Easter Seal Society for Crippled Children and Adults.

HELEN M. KLEYLE
Dean

INTRODUCTION

This Task Analysis Approach to Prevocational and Vocational Training for the Handicapped is the end-product of Duquesne University's participation in the Pennsylvania Consortium for the Preparation of Professional Personnel. This book was written by the eighteen graduate students, whose names appear in the Table of Contents, culminating a period of intensive work with handicapped adults at the workshops operated by the Pennsylvania Association for Retarded Citizens and the Easter Seal Society for Crippled Children and Adults during the summer of 1975. Although the students were responsible for the actual writing of this handbook, it would not have come to be without the cooperation and support of the many professionals involved in the project.

We, therefore, wish to publicly thank all of the following:

Dr. Ferman B. Moody, Director of the Bureau of Special and Compensatory Education, Harrisburg; Dr. William Ohrtman, Division Chief; Mr. Jeffrey N. Grotsky, Special Education Advisor and Coordinator of the Consortium; and Mr. Wayne L. Grubb, Consultant, Bureau of Vocational, Technical, and Continuing Education -- for their assistance, both professional and financial.

Mrs. Loretta Bailie, Administrator, and all of the directors, supervisors, and professional personnel of the PARC workshops who gave so unstintingly of their valuable time to confer with the students during seminars, and to answer multitudinous questions.

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Dr. Helen M. Kleyle, Dean of the School of Education, Duquesne University -- for her unfailing professional leadership and constant personal encouragement to all who participated in the project.

Mr. Timothy C. Kelly, faculty member in the Special Education program at Duquesne University -- for his valuable assistance during the formative stages of the project, his lectures on behavior modification, and his direction and editing of the video-taping sessions.

Mr. Wilson Renne, Assistant Project Director -- for his valuable assistance in supervision of the trainees and his aid in editing this guide.

Mrs. Patricia Kelly -- for the vivid drawings which illustrate and complement the text.

One last word of thanks to the trainees for whom the project was designed and whose many hours of strenuous work culminated in a successful program as evidenced by this guide.

GLORIA M. ROCCHETO
Director

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FROM CONTRACT PROCUREMENT TO WORK COMPLETION

Contract procurement requires many steps such as workshop organization, time studies, bids, foreman or work supervisor's duties, training procedures, safety, productivity and re-evaluation. However, it is important to remember that flexibility and communications are the key words for all steps involved.*

Contract Procurement

The first basic procedure is locating receptive businesses with contracts that can be fulfilled by clients exhibiting the skill levels represented by the workshop's population. This is the responsibility of the procurement officer and involves a great deal of public relations work. In addition to contacting businesses or industries for prospective sub-contracts for the workshops, the procurement officer might also search the newspaper to learn about contracts open for bids.

At this time the procurement officer must be able to point out the workshop's ability to save the prospective employer money while helping to fulfill the company's obligation to contract a percentage of work to handicapped individuals. It is also advantageous to present the workshop's ability to deliver an acceptable product, manufactured to the company's specifications.

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*Information obtained through conferences with procurement officers and other professionals from the workshops.

When the prospective employer has shown an interest in sub-contracting work to the workshop, it is important to acquire the materials to be used in the contract and/or a prototype with manufacturer's specifications. These are essential in preparing a bid based on task analysis and time studies to determine feasibility of potential contract.

Task analysis of the contract or breaking down the entire operation into its basic component parts is the next major procedure. The component parts may include any number of steps depending on the ability level demonstrated by the workshop's population and the complexity of the contract specifications.

The determination of a production norm through time studies goes hand in hand with task analysis. In setting a norm representative of the workshop population, it is essential to be familiar with the product and to discover the most expedient production methods. The handicapped employees' production rate is compared to the production expected by the "normal" employee to establish the competitive norm.

Two possible formulas for the development of a competitive norm are:

$$\frac{\text{The most optimistic number produced} + 4\text{X}\,\text{The most likely number produced} + \text{The most pessimistic number produced}}{6}$$

(To determine the most optimistic, likely, and pessimistic numbers, it is necessary to set up three manufacturing simulations.)

OR:

$$\frac{\#\text{correctly done}}{\text{Time}} = \text{Amount per minute X } 50^{*} = \text{Amount per hour}$$

$$\frac{\text{Amount per hour}}{\text{Industrial norm}} = \text{Competitive Norm}$$

*(It is customary to use a 50-minute or 3000 second hour to bid, allowing for wasted motion or motion not directly involved in production. A 60-minute norm significantly increases the norm expected from the population).

Both of these formulas have been approved by the Wage and Hour Commission. The times mentioned in the above formulas may be compiled by the procurement official, a director, a supervisor, or a client participating in a production simulation. This simulation should contain a sizeable sample of the product, an amount that will give a realistic norm for the population.

Time Study

In preparation of a bid for a contract, a conscientious time study must be worked out. To do this successfully, certain assumptions are made. They are:

1) That the employee has average ability, intelligence, and experience.

2) That the program is receiving average support and supervision.

3) That the employee has proper equipment and products to perform the job.

4) That a reasonable maintenance level has been maintained and present conditions are satisfactory.

When "above average" quality is present in any of the assumptions, the times listed can be reduced. Likewise, any exceptional "weaknesses" would necessitate an increase in the time listed.

A time study should be made to establish the time rate. It should include customer contact information; transportation requirements; a description of the contract which lists due date and the number of people required to perform the task; the equipment and supplies "on hand," company supplied, and new equipment to be purchased; in addition to the time and rate of pay for each step of the operation.

The unit of measure for a time study is the competitive norm. The formula for arriving at this is as follows:

$$\frac{\text{Optimistic} + (4 \times \text{The Most Likely}) + \text{Pessimistic}}{6}$$

This formula, in comparison to the industrial norm, is based on the fact that workshops function on 50 per cent productivity and all conclusions are acceptable at one-half that of industry. The optimum does not include wasted time; therefore, the study is computed on a 3000-second hour or a 50-minute hour. If a 60-minute hour is used, the norms would naturally rise. Time limitations for each step helps to decide the level best suited for each step -- complicated, high, average, low, etc., etc.

Wage per hour contracts require three (3) bids; therefore, a sizeable sample in most cases is needed to give supervisors

enough observation and training for every step, once the practice period is completed and necessary, and "jigs" and equipment are on hand, the actual study begins. A stop watch is used to time each step; for example:

If an individual is able to do 200 pieces of step #1 in 30 minutes; 150 pieces of step #2 in 30 minutes; and 210 pieces of step #3 in 30 minutes, then the average would be approximately 180. This in term gives us one completed project every 10 seconds. Thus, wage per hour can be computed as follows:

A) 10 sec.) 3000 sec. = 300 pieces / 50 min. hr.

B) 300 pcs.) $2.100 = .007 norm per piece / min. wage

The client's pay rate is based on his productivity compared to the norm; thus, a client whose productivity is 50 per cent of the norm productivity would receive 50 per cent of the norm pay rate.

At times it is necessary to assign ancillary employees to a job, who are not directly involved in any of the steps needed for production, such as suppliers, packagers, etc. These individuals are paid "historical" productivity (the average of their productivity level), and their pay is listed as overhead.

Bids

The time study also determines the amount each client will be paid for each step of the contract or the piece rate for a

completed product. The amount at which the contract will be bid also influences what the employees will be paid.

Overhead expense is a primary stumbling block for those unfamiliar with sub-contracting work. Overhead includes direct, indirect, and variable costs. For example, transportation of equipment and materials, foremen time, cost of supplies, necessary equipment, handling, packaging, and even hauling garbage. These costs must be considered to insure an equitable bid. For example, overhead on a product may be as high as 300 per cent; therefore, a contract bid at $2.10 per hour now has a real cost of $8.40 per hour. Average overhead is approximately 125 per cent.

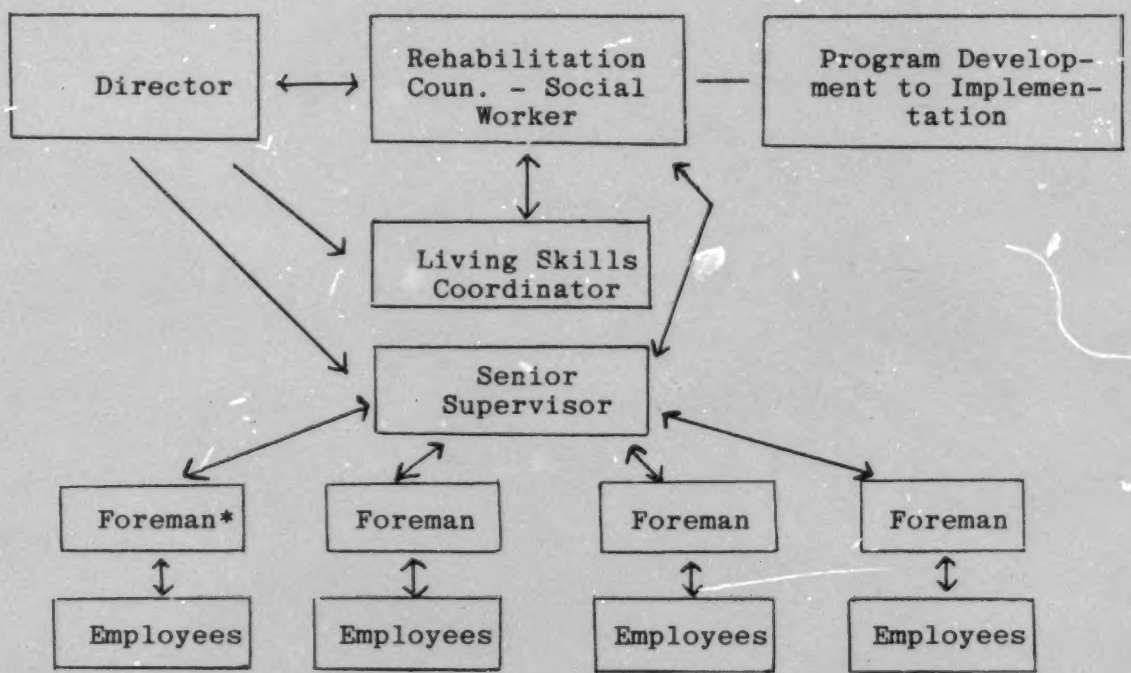
There are no set guidelines to assure that a bid will be competitive. If the bid is successful and the contract awarded, it should be consigned to the workshop exhibiting the greatest expertise of skills necessary for its successful completion. At this point, the production is turned over to the director of the workshop. It is the responsibility of the director to meet contract deadlines; handle public relations with the company, keeping a good flow of communication open; and to maintain the quality of work to company specifications. Some of these responsibilities are disbursed to staff personnel; however, the director is ultimately responsible for the total operation of the shop.

As stated, the communication flow is paramount. An example

of a workshop organizational flow-chart is found in Figure 1. Any difficulties encountered may be resolved by a team approach. It is not unusual for the contract procurement official to enter the workshop to develop the most expedient work flow from raw materials to finished product. Reordering is handled by communication between supervisor, director, and procurement officer.

Figure 1

ONE EXAMPLE OF A WORKSHOP ORGANIZATIONAL FLOW-CHART



*The number of foremen and employees will vary depending upon the size and enrollment of the workshop.

Ancillary personnel involved in assisting clients in the development of work adjustment skills and attitudes necessary to productivity of the employees are:

The rehabilitation counselor orients the client in every aspect of vocational development; i.e., work skills in activities centers, within sheltered workshops, or in community placement. The counselor evaluates the client through use of work samples, psychometric testing, and on-job try-outs. Through conferences the counselor assists the client in setting goals based on his/her functioning level. In addition, the rehabilitation counselor is also involved in determining which clients are best suited to the demands of a particular contract.

The social worker is the liaison between parents, community, workshop, and clients, and strives for the most realistic social and emotional adjustment of the employees.

The living skills coordinator organizes and implements programs in living skills, personal hygiene, and community skills.

Contract production responsibility is under the direction of a foreman or supervisor whose duties include:

1) Scheduling machinery, tools and/or materials required to complete the contract. Special materials, supplies, and equipment which are needed for a specific contract may be obtained through any or a combination of the following:

   a) the contracting company provides them;

b) the sub-contractor purchases them and bills the contracting company for reimbursement;

c) funds to purchase special equipment by the sub-contractor through application to a funding agency.

2) Deciding on operations and/or steps in the operations necessary to complete the tasks to fulfill the contract.

3) Selecting personnel (in cooperation with other staff) and determining various skills necessary to perform the tasks.

4) Designing and building jigs and other aids which will help the employee perform the tasks of the contract.

5) Adapting, adjusting steps in the operation to make the best use of the worker's abilities.

6) Supervising the personnel in actual work performance of the contract. The director and the senior supervisor oversee all foremen, employees, and contracts.

7) Adapting and/or combining steps to achieve greater efficiency as necessary.

8) Recording individual productivity levels for payroll.

Training Procedure

Philosophy

Primarily, the purpose of the training procedure is for the handicapped person to develop work attitudes and skills. In addition, this on-going training is considered a vehicle for rehabilitation. Ideally, an employee learns all phases of the work, depending on his/her abilities and the nature of the work involved. Maximum rehabilitation is considered an equally important and continuous goal for each employee throughout all work situations.

Teaching the Job

The work supervisor or foreman is responsible for teaching the employees the steps in the contract work. (Sometimes the rehabilitation counselor does this teaching as part of the evaluation process). The foreman demonstrates each step, using the actual material of the contract. The employee then models the foreman, who corrects and helps the employee to perfect each step. It is important that the employee become as proficient as possible in each step; proficiency level is reached when nine out of ten attempts are correctly performed. Each step is stressed, and assumptions are never made that an employee can perform the step without the actual performance.

The foreman may adapt the steps of the contract somewhat to match the abilities of the employees. In some cases, the more successful employees could help to teach one of their peers part of the contract work.

Skill Development

Any skills essential in performing the contract are taught concurrently with the steps of the contract. These skills could include: use of tools, color recognition, counting, weighing, shape recognition, etc. If an employee is capable of performing the manual work of the contract but has difficulty in a necessary skill, cues or aids can be developed. Examples would include: color coding boxes into which objects of various colors are to be sorted or matching objects to cues instead of counting the objects. These related skills can be

developed during "down-time." This could save precious contract time later and provide beneficial job-related "down-time" programs.

Working Vocabulary

All necessary and specialized terms should be taught in the step-by-step process of the contract. The vocabulary could include the names of tools, materials, and machinery; the terms that denote quality and quantity. When it is deemed necessary and if the employee is capable, the terms should be taught in both the spoken and written form. As with skill development, the working vocabulary could be taught during "down-time." (Further discussion of "down-time" is found at the end of this section).

Evaluation of Productivity

Continuous assessment of all activities during production must be observed and analyzed for safety factors, improvement in performance, changes in personnel, and "wear" on equipment.

Each employee's work habits are re-enforced to "break" the norm and to strive for 100 per cent productivity, thus bringing the competitive norm of the handicapped closer to the industrial norm. To re-evaluate productivity, a time study, as described previously, may be employed. In most cases, rate of production increases because of familiarity of ma-

terials and tools. Rates of pay increase with increased productivity and, often, steps or operations can be combined to stabilize the industrial process.

Basic Considerations in the Operation of the Workshop

General Safety Guidelines

Due to the nature and extent of contracts in work activities centers and sheltered workshops, safety regulations should be followed as they are in industrial settings. In some instances, safety rules may be more stringent, not only for the welfare of the individual workers, but also for the general safety of all the employees.

1) Fire extinguishers properly placed and maintained; all employees adequately trained in their use.

2) Fire exists -- adequate number; fire drills conducted monthly.

3) All machinery should be unplugged when not in use.

4) Electrical outlets, especially those to machines, should be hooked into switches which can be turned OFF when machines are not in use.

5) Saw blades, drill bits, and other cutting devices should be removed when machine is not in use.

6) All motors and pulleys on machines should be properly guarded; other parts should be guarded as well: cams, gears, wheels, shafts, cylinders, etc.

7) Work areas of machinery should be designated by striped markers and made safe by covering the area with non-skid paint. (These areas should be periodically maintained).

8) Eye protection -- goggles or other eye shields should be provided and worn when indicated.

9) Gloves should be provided and worn when necessary.

10) Hand tools (hammers, screwdrivers, razor knives, etc.) should be stored and locked when not in use.

11) Appropriate clothing should be worn during machine operation.

12) Complete first-aid cabinet available.

13) Supervisors and foremen trained in basic first-aid procedures.

14) Employees' work in any area should be supervised (especially when machinery is used).

15) All flammable and combustible materials and chemicals (paint thinner, solvents, etc.) should be capped and stored in metal cabinets. Used rags with these materials should be discarded in a metal safety can.

16) Safety shoes or shoe coverings should be worn where indicated.

17) Electrical outlets, especially those to machinery, should be hooked into switches which can be turned to OFF when machinery is not in use (see No. 3).

18) Safety rules must be stressed with various contracts.

19) Discuss and teach general safety and its importance. Have firemen or safety engineers from industry periodically visit as guest speakers.

Down-Time

"Down-time" is the time between contracts when no outside work is available. The employees are free to utilize this time in other program activities. A team approach of the workshop staff should be used in developing a down-time

program. This time could be divided into developing skills, based on individual client needs, in the areas of community living, personal hygiene, socialization, safety, use of tools and machinery, additional occupational skills, and possibly in the development of a sex education program.

Some specific down-time activities are suggested below:

1) Discussion of use of leisure time -- at home and after work is finished.

2) Prepare lunch with lunch money: shopping and cooking skills.

3) Prepare baked goods and hold a bake sale.

4) Participate in Weight Watchers program.

5) Field trips into community -- stores, library, bank.

6) Recreational activities: bowling, softball, picnics.

7) Gardening.

8) Use of hand tools, power tools, machinery.

9) Maintenance and care of tools and machinery.

10) Safety regulations and precautions.

11) Custodial skills.

12) Make projects in woodmaking skills or other crafts (cutting boards, bookends, clipboards).

13) Using the sewing machine to practice for better quality and speed control.

14) Learn to clean the sewing machine.

15) Learn to use soldering gun and the proper techniques of soldering.

16) Counting skills.

17) Monetary skills.

18) Time skills.

19) Program of human sexuality and social mores.

20) Building maintenance and improvement (workshop site); i.e., sweeping, mopping, waxing, painting, construction.

PROBLEMS IN OCCUPATIONAL PLACEMENT

It is generally agreed that failure of an employee to get and keep a job in competitive industry is more often due to a lack of interpersonal relationships rather than the inability to perform the tasks related to the job itself. Cognizance of this fact was reinforced many times during conferences with the professional staffs of the various workshops. Listed below are the problems most often cited by those professionals and also most often noted by the trainees who, in addition to participating in the summer program, are involved in the education and training of handicapped individuals by virtue of their own professional roles as teachers, supervisors, vocational educators, etc.

Because orientation and preparation for successful work adjustment begins quite early in the life of a handicapped individual, problems outlined below suggest implications that should be quite clear to teachers and other professionals who have contact with the handicapped in the years preceding actual employment.

Inability of the handicapped to perform any or all of the tasks listed below in the competencies areas create problems which restrict the individuals from achieving success in gainful employment. These problems, when encountered, preclude the opportunity for the handicapped person to achieve occupational success.

Competencies

I. Academic

A. Job Application

1. The most common problem in filling out an application form is reading and understanding the form.

*2. The more common information needed to be known by the applicant is:

Name	Marital Status
Address	Citizenship
Phone Number	References
Social Security Number	Previous Jobs Held
Birth Date	-- Company's Name
Height	-- Employer's Name
Weight	-- Date of Employment
Health	Additional Information
Education	

*Applicant may carry a self-inventory card which is not stigmatizing. All employable adults carry similar identification cards as a matter of course.

B. Sight Vocabulary

1. Refer to vocabulary samples at the end of Section III for a list of functional words and words of work.

C. Functional Math Skills

1. Money Skills

a. recognition of coins and bills ($1, $5, $10, $20).

b. know the value of coins and bills.

c. exchange value.

d. addition and subtraction related to money.

e. making change.

f. ability to handle his/her pay -- either cash or check.

2. Time Skills (functional application to):

a. getting ready for work.

b. transportation schedules.

c. break time.

d. lunch time.

e. number of hours worked per day.

f. vacations and holidays.

g. work schedules.

D. Telephone Usage

1. Recognizes numbers on phone.

2. Is able to dial home phone number and work phone number.

3. Is able to use a coin phone properly.

4. Proper telephone etiquette.

II. Physical

A. Physical Limitations

1. Physical handicaps may inhibit a client from obtaining and holding a specific job.

B. Tolerance

1. Ability to cope with work and work problems.

C. Dexterity

1. Manual dexterity as related to work requirements.

a. gross motor skills.

b. fine motor skills.

D. Endurance

1. Ability to sustain oneself during a working day.

E. Work Skills

1. Performance of various jobs.

III. Social

A. Job Etiquette

1. Appropriate dress, language, and behavior.

2. Consideration of others.

3. Observation of safety regulations.

4. Social skills in relations with co-workers.

a. appropriate conversations.

b. interacts appropriately at lunch and break time.

B. Work Attitudes

1. Job attendance.

2. Punctuality.

3. Enthusiasm.

4. Responsibility.

5. Productivity.

6. Quality of work.

7. Esprit de corps.

8. Postive response to supervision.

C. Appearance

1. Personal cleanliness of body, hair, teeth, clothing.

2. Appropriate dress for work.

*IV. Mobility

A. Arrive and leave the job independently.

B. Inner shop mobility.

C. Emergency mobility plans for:

1. Inclement weather.

2. Recognition of alternate landmarks.

*For further information, see Mobility, Section III.

Other Factors Related to Success on the Job

There are several other factors which are beyond the control of the handicapped individual and outside the periphery of competencies noted above but which exert considerable influence on the degree of success achieved by some of the handicapped. Recognizing the impossibility of citing all of these additional factors, some of those considered most important are presented below:

V. Cooperation with Parents

Although the handicapped workers are over age 21, it is nevertheless imperative that their parents be consulted and apprised of any program related to employment that has been designed by the client and the agency. Conferences and consultations with parents should be part of an ongoing process of communication. Here again, this cooperative arrangement with parents may be a continuation of other cooperative efforts that began when the handicapped individual was in a prior setting, such as a public school or an institution.

VI. Accepting Competitive Employment

Workshops are established to be transitional. Those employees capable of competitive employment should be prepared to leave the secure atmosphere of the sheltered workshop for community placement in trades or industry. The employee who has come to a sheltered workshop from an overprotected environment is sometimes hesitant about leaving the confines of the workshop for outside employment even though otherwise qualified for the job.

VII. Employer Attitudes

Training and placement of the handicapped individual for gainful employment should be preceded by an intensive effort on the part of the certifying agency to insure understanding and acceptance by the employer. The employer's attitude will be adopted by others in his employ. Therefore, positive attitudes to be fostered in employers as members of society must begin with teachers, parents, and others who have contact with the handicapped person at any time in his/her life.

Public relations work is needed in the community to prepare the employers to accept handicapped employees and accept the fact that they are capable of performing the job.

VIII. Following Company Policy

There are always certain rules and regulations which must be observed for the common good of the group and for the efficient production of work. Following the regulations of any company will be more easily accomplished if the handicapped person learns to work as a team member. If the individual fails to observe the particular rules of the company and does not assume responsibility for himself as a member of the entire work force, social interactions break down, and work production may be impaired.

EVALUATION OF OCCUPATIONAL AND COMMUNITY LIVING SKILLS

In determining a client's potential for employment, it is necessary to evaluate not only vocational aptitudes but also the individual's ability to maintain himself in the social milieu of his total environment.

Preparation for employment therefore, whether it be sheltered or competitive, must include education and training in all areas related to success in employment. In addition to training for specific vocational skills, it is also imperative to assist the handicapped person in acquiring personal and social skills which will enable the individual to adjust to the total environment.

Evaluation of Vocational Strengths

In evaluation centers in vocational settings, handicapped students and clients, alike, are assessed by work samples and tests in order to determine their work strengths and deficiencies. The initial evaluation will include assessment of work habits and skills, behavior, social adjustment, and the planning for immediate and long-range vocational and personal goals. Evaluations are ongoing. After an intensified study and assessment of their work skills, etc., the clients will continue to be evaluated periodically throughout their employment.

I. General Orientation to the Workshop

A. Orientation to the Physical Plant

1. Washroom.

2. Lunchroom.

3. Lockers.

4. Exits.

5. Work areas.

B. Orientation to the Rules and Regulations of the Workshop

1. Work hours.

a. beginning of work day.

b. break time.

c. lunch time.

d. end of work day.

2. Use of the time clock.

3. Conduct on the job.

II. Instruments Used to Measure Work Related Abilities

Tests are administered according to the physical, mental, emotional, and social development of each new client. Some of the instruments used frequently in evaluation of clients' abilities are:

A. Standardized Testing Materials

1. Achievement tests.

a. Peabody Individual Achievement Test

b. SRA Math Index

c. SRA Reading Index

d. Wide Range Achievement Test

2. Interest tests.

   a. California Picture Interest Inventory

   b. Geist Picture Interest Inventory (Male/Female)

3. Manipulative tests.

   a. Bennett Hand-Tool Dexterity Test

   b. Crawford Small Parts Dexterity Test

   c. Minnesota Rate of Manipulation

   d. Purdue Pegboard

4. Other.

   a. Revised Minnesota Paper Form Board

   b. Minnesota Clerical Test

   c. Bennett Mechanical Comprehension Test

   d. Vineland Social Maturity Scale

5. Work samples.

   a. TOWER Evaluation System

   b. Minnesota Clerical Series

   c. Singer/Graflex System

This system consists of sixteen carrels. Each contains all the tools and materials necessary for the operation of the evaluation station. All instructions are given through the use of filmstrips and cassette tapes. The evaluator provides further instruction and support when necessary. These evaluation stations assess the individual's ability to work in certain vocational areas, determine general areas of vocational interest, and define additional vocational training

needs. Attitudes as well as aptitudes are considered in the evaluation. Areas evaluated are: basic tools; bench assembly; drafting; electrical wiring; plumbing and pipefitting; carpentry; refrigeration, heating and air conditioning; soldering and welding; office sales clerk; needle trades; masonry; sheet metal; cooking and baking; small engine service; medical services; cosmetology.

B. Simulated Work Samples

Simulated work samples are devised to meet the need of each evaluation center. What is crucial to one may be of little consequence to another. The following examples of simulated work samples are among those which could be used in classroom situations for prevocational training.

1. Assembly Tasks.

a. counting and inserting five party favors into a bag and placing the finished product into a box (50 complete bags in all).

b. place colored balloons in a bag with an insert in a specified order; i.e., 2 blue, 2 red, 2 green on the bottom and 4 yellow on top (when completed, there should be 50 bags).

c. count out 12 plastic forks and 13 plastic spoons and place them neatly in a bag (50 packets).

d. count out 25 straws (pencils, etc.) and wrap them with a rubber band three times (50 packs).

e. count out the number of paper clips in an envelope and mark the number on the envelope.

f. count out 6 party invitations and 6 matching envelopes. Place 5 invitations with the picture facing up on top of the 6 envelopes. Then, take the remaining invitation and turn it inside out and place it on the bottom of the envelopes with the writing facing out so it may be easily read. Place the packet in a small plastic bag (50 packets).

g. place 2 washers and 1 nut on 100 stationary bolts.

h. insert 2 screws securely into a given metal plate (50 plates).

i. assemble and disassemble a chair -- legs and back.

2. Clerical Tasks.

a. folding letters to fit various envelopes; i.e., in half, in quarters, etc.

b. collating materials in a given order to be stapled.

c. collating materials in a specific order to be mailed.

d. stuffing envelopes with collated materials.

e. closing envelopes either by sealing or tucking in the flaps.

f. labeling the envelopes.

(1) apply self-sticking labels.
(2) paste or glue labels.
(3) write or type addresses.

g. opening mail -- correct use of a letter opener.

h. sorting mail.

(1) according to zip code.*
(2) according to name.*
(3) according to department.*

*may be used together or separately

i. mail collection -- mail pickup within the school or workshop.

j. mail delivery -- delivery of mail or interoffice memos.

k. basic filing.

(1) file numerically cards marked from 1 - 100.

(2) file names on a 3" x 5" index card by first letter only.

(3) file names on a 3" x 5" index card by first three letters, etc.

l. advanced filing -- filing alphabetically of materials by entire last name (first name when necessary) with 100 per cent accuracy.

m. typing of a given paragraph; names and addresses, etc.

n. math skills assessment.

(1) simple addition, subtraction, multiplication, division problems -- paper and pencil.

(2) same as the above with use of an adding machine.

(3) payroll -- use time cards and daily wage records to record the official week's tally sheet and make up pay checks.

(4) record keeping of daily, weekly, or monthly sales.

o. telephone skills.

(1) answer phone.

(2) dial phone.

(3) use of directory -- locate name in directory and then write address and phone number on a sheet of paper.

3. Monetary Skills.

a. identify coins and bills.

b. ability to count money.

c. ability to make change.

4. Sorting Tasks.

a. sort chips by color.

b. sort chips by shape, ignoring color.

c. sort chips by color and shape.

d. sort washers into piles of same-size washers.

e. sort screws and washers into two separate piles.

f. sort screws and washers into piles of same-size screws and washers.

III. Shop Placement

While each client performs a given task, the evaluator notes the time involved; quality of finished product; errors; ability to follow instructions; ability to work alone; need of a structured and close supervision. Additional comments may be made upon the client's work habits and behaviors.

At the end of the client's evaluation period, a report is submitted to the staff and recommendations are made. Placement in the shop depends on:

A. Job availability.

B. Work ability of client.

C. Social behavior.

D. Client's ability to work independently or amount of supervision required.

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   110 Seventh Street
   Pittsburgh, Pa. 15222

2. Evaluation Department
   Mon Valley School
   Intermediate Unit #3
   1900 Clairton Road
   West Mifflin, Pa.

3. Evaluation Department
   Philadelphia Association for
   Retarded Children -- WTC
   2400 West Westmoreland Street
   Philadelphia, Pa. 19129

4. Berks County Vocational Services
   Program for the Handicapped
   Berks County Intermediate Unit #14
   11th Floor, Courthouse
   Reading, Pa. 19601

5. Occupational Transitional Education
   Upper Bucks County Area Vocational
   Technical School
   Star Route
   Perkasie, Pa. 18944

Mobility

I. Mobility Within the Home

A. Recognition of rooms within the home.

B. Locate specific rooms, assisted and unassisted.

II. Mobility Within the Neighborhood

Prerequisite: Identification either verbal or written

A. Recognition of own home on the street in the daylight and in the night.

B. Recognition of yard boundaries.

C. Pedestrian training.

1. Recognizes and follows directional signals and signs.

2. Recognizes and follows good safety procedures when signs and signals are not present.

D. Recognizes neighborhood businesses and services, e.g.:

1. Firehouse, funeral home, gas station, post office, bank, policeman, churches, stores, barber or beauty shop.

2. Recreational facilities, movies, playgrounds, bowling alleys, etc.

III. Mobility Via Public Transportation

A. Recognizes various means of public transportation.

B. Knows and uses the bus or streetcar to get to various locations.*

*Analysis follows

1. Boarding.

2. Procedure for payment.

3. Procedure for disembarking.

4. Appropriate behavior on the bus or streetcar.

C. Use of the taxicab.

1. How to call a cab.

2. When to call a cab.

3. Verbal or written communication to the driver about the destination.

4. Procedure for payment.

IV. Mobility Within the School, Workshop or Employment

A. Recognition of various rooms within the building.

B. Use of correct attendance procedure.

C. Use of various facilities; i.e., restroom, locker, eating and break areas.

V. Mobility Using Elevators, Escalators, Revolving Doors, Electronic Doors, and Manual Doors (Push/Pull)

A. Getting on and off, in and out, pushing and pulling at the appropriate places and time.

B. Recognizes the appropriate numbers for floors.

**Task Analysis: Employee can travel independently and safely to and from work using public transportation

I. Prerequisites

A. Able to tell time.

B. Physically mobile.

C. Use of money.

D. Recognition and retention of landmarks.

E. Use of telephone.

II. Task Analysis

A. Determine prior to actual mobility training the best possible route of bus or streetcar.

B. Follow bus in car with employee before actually riding bus (perhaps several times).

C. Acquaint person with road signs or other visual landmarks along route (specifically landmarks identifying where he gets on bus and where he gets off bus).

D. Ride with employee on bus for at least a week or longer if needed. During this week, emphasize the following:

1. When to leave workshop.

2. When and where to catch bus.

3. Procedure for paying.

a. Use of bus pass.
b. When to pay.

4. Procedure for disembarking from bus.

a. Recognition of landmarks.
b. Pull cord to ring bell.
c. Walk to front of bus.

5. What to do in emergency.

a. Miss the bus; who to call.
b. Lost money; borrow and pay back.
c. Ride is offered from stranger.

E. Follow bus with car to make sure employee knows when to get off bus and knows needed procedures. Do this at least two days.

F. On final day of traveling alone, have person call workshop when he has reached destination.

SOURCE: Parc-Way Industries North: Bus Transportation Program

Grooming Skills

I. Appropriate Personal and Hygienic Habits

A. Daily and weekly practice of good personal grooming and hygiene.

1. Bathing, use of deoderant, shaving if necessary, dental hygiene, hair care.

2. Use of toilet facility and care for toilet needs in an acceptable manner.

B. Management of menstrual cycle.

C. Appropriate care and maintenance of clothing.

1. Correct choice of cleaning method for clothing items.

2. Use of washer, dryer, irons and ironing boards in the home and at the laundromat.

3. Proper storage of clothing; i.e., folding and placing in drawers, hanger use, etc.

4. Simple mending of clothing.

D. Purchase of own clothing.

1. Recognizes the need for an item.

2. Selects appropriate store.

3. Recognizes size.

4. Chooses appropriate style.

5. Discern prices.

6. Understands care and maintenance instructions.

7. Checks fit by using the dressing room to try on the garment.

II. Appropriate Grooming and Clothing for Employment

A. Practices personal grooming and hygiene habits.

B. Selects and uses appropriate clothing for employment; i.e., prescribed uniform, shoes, etc., for specific job.*

C. Purchases appropriate fitting garments.

*Task Analysis of Purchasing a Uniform

I. Prequisites

A. Knows and uses transportation to get to specific stores.

B. Knows the type of store in which to purchase the uniform.

C. Can locate the store.

D. Knows and states either orally or written the function of the uniform.

E. Knows and recognizes the type of uniform that is needed.

F. Knows and recognizes uniform sizes.

G. Knows and practices:

1. Pedestrian safety.

2. Good shopping courtesy.

3. Correct money procedures.

4. Wearing properly fitting clothes.

5. Correct removal of clothes; i.e., which clothing items to remove when trying on various garments.

H. Knows how to and is capable of seeking an alternate store in which to purchase the uniform.

I. Can find and comprehend through verbalization the care instructions of the uniform, the size and the price tag.

J. Be willing to ask for assistance from the salesclerk.

II. Responsibilities of the Purchaser

A. Finds the department of area in which the uniforms are located.

B. Finds the specific styled uniforms or uniform (follows employer's specifications).

C. Finds the correct size.

D. Tries the uniform on in the dressing room.

1. Asks where the dressing room is located.

2. Removes one's outer clothing and tries on the uniform.

a. Check for correct fit.

b. Makes the decision to purchase the correct fitting garment.

3. Gets dressed in one's own clothing.

E. Can comprehend the price of the uniform and the maintenance instructions.

F. Takes the uniform to the salesclerk or cashier.

G. Gives sufficient amount of money to the clerk to purchase the uniform.

H. Counts the change received from the clerk.

I. Leaves the store with satisfaction that a correct purchase was made.

Development of Skills in Food Selection and Proper Eating Habits at Home, at Work, and Within the Community

I. Food Selection

A. Know, select, and prepare basic breakfast type foods.

B. Know, select, and prepare lunch type foods.

1. Selects appropriate foods for a carried lunch where no supplementary preparation facilities are available.

2. Selects appropriate foods for supplementary preparation where facilities are available; i.e., food and beverage machines, hot plates, cafeteria facilities.

C. Know, select, and prepare dinner type foods.

D. Discriminate and use instant and prepackaged food items and meals; i.e., instant and cooked puddings, prefixed chicken and T.V. dinner items.*

*Task analysis follows

II. Proper Eating Habits

A. Knows and practices appropriate personal sanitation habits as related to foods and tableware handling.

B. Sets table using appropriate tableware and flatware.

C. Uses tableware appropriately; i.e., table coverings, napkins, flatware and dinnerware.

D. Knows and uses correct table manners and procedures when needed.

1. Chews food with mouth closed.

2. Talks with mouth empty.

3. Eats neatly.

4. Uses utensils properly.

5. Uses napkin properly.

III. Practices the Food Selection and Proper Eating Habits in Daily Life; i.e., Home, Work, Community, and Recreational Activities

*Task Analysis of Grocery Shopping

I. Prerequisites

A. Able to use public transportation.

B. Able to use money properly.

C. Recognize food items.

D. Familiar with arrangement of grocery store.

E. Recognizes good quality of meat, produce, canned and prepackaged items.

F. Practices courteous shopping habits.

II. Responsibility of Shopper

A. Check newspaper and magazines for specials and coupons.

B. Decide on foods to be served in meal desired using Basic Four Food Guide.

C. Check to see which supplies are on hand and if there is a sufficient amount.

D. Decide which supplies are needed.

E. Make shopping list.

F. Decide on appropriate amount of money to purchase desired groceries.

G. Decide what store to purchase groceries; i.e., local grocery, small chain store, large supermarket, etc., keeping in mind specials and coupons from item No. 1 above.

H. Decide on transportation to store; i.e., walk, public transportation.

I. Enter store and get shopping cart.

J. Select food items from those listed on shopping list, considering the following:

1. Check labels on packages

a. Numbers of servings
b. Ways to prepare food
c. Storage of food
d. Compare brands for cost per pound

2. Select quality and quantity to fit your meals

3. Consider if storage place is available

K. Ask clerk for help if any difficulty arises in finding items.

L. Push grocery cart to front of store to check-out clerk.

M. Place groceries on check-out counter.

N. Give clerk coupons for those items on special.

O. Pay clerk for groceries.

P. Count change received from clerk.

Q. Carry bagged groceries out of store.

R. Return cart to cart return.

S. Return home with purchases.

T. Put food away in appropriate place.

FUNCTIONAL WORDS

airport
back
barber
beware
bridge
bus
cashier
caution
close
cold
construction
dead end
deep water
dentist
doctor
do not enter
don't walk
down
drugs
elevator
emergency
exit
explosives
fallout shelter
fire
fire escape
flammable
help
high voltage
hospital
hot
in
keep off
keep out
ladies
left
listen
look
lost
meat market
men
name
no fishing
no hunting
no smoking
no swimming
no trespassing
no
nurse
off
office
open
out
over
poison
police
polluted
post office
private
prohibited
property
pull
push
quiet
railroad crossing
railroad station
restrooms
right
safety zone
school
school crossing
stop
street
telephone
town

underpass	walk	yes
up	warning	
wait	wet paint	

THE WORDS OF WORK*

You're retarded; you apply for work. "Here," says the personnel officer, "fill out this application form." Do you know all the words on the form?

Richard J. Wilson, Special Education Specialist in San Bernardino, California, feels that retarded job-hunters sometimes face their first road block when they have to fill out the form. He made a study of the words most commonly used in application forms; he teaches them to his teenage students. These are the words, <u>in the order of their frequency on applications</u>:

employer	no.	presently
employed	zone	principal
employment	college	coast
present	height	separated
phone	list	middle
application	weight	signature
mo.	applicant	course
rate	dependents	dept.
relatives	physical	education
applied	type	experience
previous	widowed	military
completed	divorced	occupation
social sec. no.	position	service
yr.	relationship	training
business	phy.	citizen
single	profession	defect

nature	duty	stationary
record	discharged	length
attended	graduated	arrested
female	handicaps	complete
male	including	disposition
birthplace	location	graduate
degree	monthly	grammar
discharge	maiden	health
seasonal	notify	hernia
wage	naturalized	handed
former	personal	whether
emergency	remarks	local
foreign	status	misc.
odd	trade	marital
previously	sal. (salary)	offense
references	s. s. no.	order
veteran	rank	resort
concern	persons	traffic
choice	unemployed	university
citizenship	certificate	violations
character	social security	available
correspondence	descent	alien
supervisor	details	academic
entry	item	forces
information	companies	regardless
apprenticeship	doctors	ckd.
active	serial	disability
described	skin	additional

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subjects	furnish	motor
emp.	guard	nationality
initial	G. I.	naturalization
spouse	graduation	notified
salary	Gov't.	operation
suggestion	grad	petition
specialization	hobbies	prefer
summarize	history	photograph
Negro	hobby	postal
sex	illness	permanent
specify	issue	quit
accidents	identification	qualifications
briefly	example	receive
bus. (business)	exam	recent
compensation	etc.	reserve
classification	employee	released
canning	advertisement	retail
card	interviews	regular
draft	insurance	recommended
data	injury	referred
disabilities	inclusive	agency
earnings	knowledge	accord
employ	legal	form
factory	marines	ink
firm	marriage	mailing
formal	major	

*The President's Committee on Employment of the Handicapped
1111 Twentieth St., N.W.
Washington, D.C. 20210

Examples of Vocabulary Related to Use of Tools. These Words Could be Learned Orally -- Demonstrated and/or Written.

Wrenches:	adjustable wrench allen wrench box-end wrench ratchet wrench
Pliers:	bent needle nose pliers lineman's pliers slip-joint pliers
Hammers:	ball-pien hammer straight claw hammer curved claw hammer
Screwdrivers:	phillips screwdriver off-set screwdriver standard screwdriver
Saws:	hack saw coping saw hand saw key-hole saw back saw (miter box)

Sockets

Extension Bar

Flex Handle

Speeder

Ignition Gauge

Stainless Steel Rule

Punch

Chisel

Electric Drill

Drill Bits

Trowel

Pipe Threader

Propane Torch

Sander

Bench Vise

Micrometer

Level

Plane

Push Drill

Carpenter's Rule

Reamer

Square: combination square
framing square
tri-square

TASK ANALYSIS OF VARIOUS JOBS

The jobs analyzed in the following section are those which were actually experienced by the workshop participants during the field experiences of the summer. Each of the students had a "hands-on" contact with each of the contracts; however, in cases where the job tasks were numerous, only one task was analyzed for purposes of illustration.

Indoor Maintenance

I. Ceilings, Walls and Glass
   - A. Vacuum Ceilings
   - B. Wash Ceilings
   - C. Vacuum Walls and Woodwork
   - D. Wash Walls and Woodwork
   - E. Clean Glass Displays
   - F. Clean Glass Doors
   - G. Clean Glass Partitions
   - H. Clean Glass Windows

II. Floors
   - A. Sweeping
   - B. Dust-Mopping or Damp-Mopping
   - C. Cleaning (Wash) and Rinsing
   - D. Waxing
   - E. Buffing
   - F. Stripping (analyzed below)

G. Vacuuming Carpets

H. Shampooing Carpets

III. Restrooms

A. General Cleaning -- sink, bowls, urinals, floor and mirror

B. Fill Dispensers and Empty Wastebaskets

IV. General

A. Dusting

B. Empty Ashtrays and Wastebaskets

C. Clean Lamps and Lights

D. Clean Drinking Fountains

Stripping a (Lobby) Floor with a Floor Stripper

I. Task Analysis

A. Remove all objects from work area.

1. Furniture

2. Rugs

3. Scrape up gum with putty knife

B. Sweep the room.

C. Fill the stripping machine with a designated amount of stripping solution and water. (The amount used depends on the type of floor stripper and the total area to be stripped).

D. Insert the plug of the stripping machine into a receptacle located away from the working area so that the extension cord will not interfere with the work.

E. Place the stripping machine in a corner parallel to the longest wall.

F. Start the stripping machine, engage the fluid control lever, and begin stripping the floor in an orderly fashion.

1. Operator should walk the stripping machine in a parallel manner consecutive to that of the initial row.

2. The solution flow lever should be disengaged approximately one foot from the end of each row to prevent ruining the floor.

G. Remove the plug from the receptacle upon completion of the job.

H. Empty the excess solution from the stripping machine tank and thoroughly rinse the container.

II. Prerequisites

A. Academic

1. Ability to follow instructions

2. Ability to measure

3. Ability to recall and retain a maintenance schedule

4. Ability to tell time

B. Physical

1. Balance

2. Coordination

3. Dexterity

4. Strength

5. Endurance

C. Social

1. Ability to adjust and cope with a variety of jobs

2. Ability to accept constructive criticism without hostility

3. Ability to accept supervisory authority

Outdoor Maintenance -- Care of Lawns

Hand-sweeping

Hand-raking

*Push-mower for trim

Tractor mower

Tractor sweeping of clippings

Hand bag clippings

Hand trim curbs

Spray weeds

Use weed-eater

Hedge trimming

*JOB ANALYSIS: Push Mowing for Trim Areas of a Large Lawn Using Mulching Mower

I. Prerequisites

A. Academic

1. Discrimination of areas to be mowed

2. Daily care of mower

3. General maintenance of mower (gas, oil, filter, spark plug)

4. Terms of mower parts

B. Physical

1. Endurance

2. Strength

3. Ability to push mower

4. Coordination to keep mower in line

5. Eye-hand coordination to fill gas and oil

C. Social

1. Cooperation with other workers

2. Incentive to do good work

D. Other

1. Knowledge of safety rules when using and maintaining mower

II. Tasks

A. Preliminary check of mower

1. For safety, disconnect spark plug wire

2. Check blade for sharpness and tightness of bolt

3. Adjust blade as necessary

4. Every three to four weeks check spark plug with appropriate gauge and adjust as necessary

5. Check air filter for cleanliness

6. If necessary, clean filter with rag or gasoline

7. Check oil and gas

8. Fill oil and gas when necessary

B. Load mower on van

C. Unload mower at site

D. Push mower to area to be mowed

1. Adjust height of mower (hi or lo)

2. Set choke at high and connect spark plug wire

3. Start mower by pulling cord

4. Adjust speed of mower (choke)

E. Mow around road guard, bushes, edge of lawn, all other areas tractor cannot reach

F. Reload mower onto van

ADAPTATIONS: This job is done as simply as possible. However, for training purposes, two mowers could mow side by side, one slightly (3 to 4 feet) behind the other.

Packaging Hardware

I. Overall Job Description

Packaging various new hardware; i.e., screws, nuts, bolts, etc., which came from manufacturer in boxes and barrels. Each type is measured and weighed into small cardboard boxes which the employee must first form. These boxes are then closed and labeled. The labeled boxes are then packed into the original box or barrel. This box or barrel is then checked by weighing on a large set of scales, for accurate number of enclosed small boxes. The large box or barrel is then placed on a hand cart or dollie and transported to the loading dock where it is ready to be loaded onto the truck to be returned to the manufacturer. This over-all job is broken down into nine specific job tasks.

II. Prerequisites For All Job Tasks (any special prerequisite follows each job task).

A. Academic

1. Be able to differentiate the right from the left

2. Be able to recognize when the scale indicator points to the designated weight indicated by a mark made by the supervisor (a non-reader could handle this job)

B. Physical

1. Thumb, finger opposition

2. Hand-eye coordination

C. Social

1. Be able to work as a team member on an assembly line work table

D. Other

1. Be able to maintain work endurance to last for a 1-1/2 to 2-hour work period before a break period

III. Safety

No special adaptions necessary

IV. Skills Involved

A. Folding cardboard; forming boxes

B. Labeling; packing; handling; stacking; loading large boxes

C. Handling a printing pad and stamper

D. Reading a designated mark on a set of scales; measuring; checking

The size of the job will determine the number of people to perform the job tasks

Job Tasks Broken Down in Sequence Form

I. Supplying Materials

A. Obtain designated number small box forms.

B. Obtain box with screws or bolts or specific hardware item to be packaged.

C. Place these supplies at the first work station on the assembly table to the left of the scales.

II. Folding and Forming Small Cardboard Box Forms

A. Shape the flat cardboard box forms into box shape.

B. Fold flaps on bottom to secure shape.

C. Arrange shaped boxes neatly to the left of scales in next work station.

III. Filling Boxes with Designated Hardware and Weighing

A. Place a box on scales.

B. With the hand, take a handful of screws or designated hardware from supply box and put into box on scales.

C. Fill until dial indicator points to correct mark which has been placed on scale dial.*

*If employee is not able to read correct number on scales, a mark is placed at correct weight

D. Place filled box to the right of scales on table assembly.

SPECIAL PREREQUISITE: This task can be performed by a person who has the use of only one hand.

IV. Closing Flaps on Boxes

A. Fold down the three flaps to close the box.

B. Place the closed and filled box to the right to next work station to be labeled.

V. Labeling Filled Boxes

A. Take a label from label box.

B. Moisten glue side of label lightly.

C. Place moistened label squarely on top of closed box.

D. Press down label so all edges are secure.

E. Place labeled box to right to next work station.

VI. Printing Size and Letter Number on Label

A. Take correct print stamp and place lightly onto ink pad.

B. Take inked stamp and place carefully on label in correct position.

C. Press lightly WITHOUT SLIPPING to leave printed size and letter number on the label.

D. Set the printed box to the right on assembly table to dry.

E. Arrange boxes neatly.

VII. Packing Completed Boxes

A. Pack the completed boxes back into the original barrels and large cardboard boxes. Be sure they are arranged neatly.

B. Stack these filled boxes and barrels near the large set of scales.

VIII. Weighing Large Filled Boxes and Barrels

A. Place box on large scale.

B. Check weight by balancing arm on scales.

C. If weight is not correct, take out one or two of small boxes to adjust for maximum correct weight.

D. Hand-carry boxes to area for closing.

IX. Closing Completed Boxes and Barrels

A. Close flaps of boxes neatly and securely.

B. Place wooden lid securely on barrel.

C. Place boxes or barrels on a hand truck or dollie and take to loading area.

D. Stack and arrange neatly.

EVALUATION:

A. Evaluation is done on an individual one-to-one basis.

B. Refer to each job prerequisite needed for that specific task.

C. The evaluation is based on speed, accuracy, and productivity.

Bagging Gaskets

This job entails putting different sizes and numbers of gaskets, color coded 3 x 5 index cards, and one instructional sheet into a plastic bag. This job involves eight employees in an assembly line arrangement.

I. Task No. 1

Worker picks up the plastic bag and places four small gaskets in it and passes plastic bag to second worker.

A. Adaptation

If employee is unable to count to four, have available a card with four circles drawn on it and the worker can place a gasket on each circle until all circles have been covered.

II. Task No. 2

Worker puts two smaller gaskets and one index card in the bag and passes to next worker.

A. Adaptation

Use of the card with two circles drawn on it if the worker is unable to count.

III. Task No. 3

Worker puts one large gasket (no bigger than the bag) and one index card in bag and passes it to next worker.

A. Adaptation

None.

IV. Task No. 4

Worker puts two small gaskets into bag and passes it to next worker.

A. Adaptation

Use of the card with two circles drawn on it if worker is unable to count.

V. Task No. 5

Worker puts an index card into bag and passes it to next worker.

A. Adaptation

None.

VI. Task No. 6

Worker puts one large gasket (must be folded in half) into bag and passes it to next worker.

A. Adaptation

None.

VII. Task No. 7

Worker puts one instructional sheet and three small gaskets into bag and passes to next worker.

A. Adaptation

Use of the card with three circles drawn on it if worker is unable to count.

VIII. Task No. 8

Worker checks the contents of the bag to determine accuracy of cards and gaskets. If plastic bag contains the correct number and kinds of gaskets and cards, the bag is placed in a box. If bag has not been properly filled, worker may correct errors himself or refer to the supervisor.

Prerequisite for Each Task

I. Academic

Ability to count is desirable.

II. Physical

Use of both hands.

III. Social

Ability to work in an assembly line.

IV. Other

Work endurance and tolerance.

NOTE: If necessary, some tasks may need to be broken down into smaller steps. This operation also may be done on an individual basis with one person doing the entire operation. The evaluation would be based on speed, accuracy, and productivity.

Connecting Lamp Cords

I. Task Analysis: Reconnecting lamp cords to switch terminals in the socket.

A. Unpacking -- unpack cords from carton and untangle all tangled cords.

B. Remove outer covering of socket.

1. Apply pressure to outer socket covering and pull away from cap -- considerable pressure is necessary to perform this task.

2. The caps stay on the cords, while the outer coverings are piled on a tray for future reassembling.

3. Slide caps along cord away from the now exposed terminals of the socket.

C. Unscrew switch terminal screws and remove exposed copper wires of the cord from the terminals.

D. Twist smaller copper wires clockwise around the terminal until very tight and one thicker wire is formed.

E. Starting at the very bottom of the socket, wrap wire around terminal screw so that a full loop is formed.

1. With the thumb, press on the bottom of the loop where wire comes together so that the loop remains wrapped tightly around the screw.

2. Using a screwdriver, tighten the switch terminal screw to secure the connection of the lamp cord to the socket terminals.

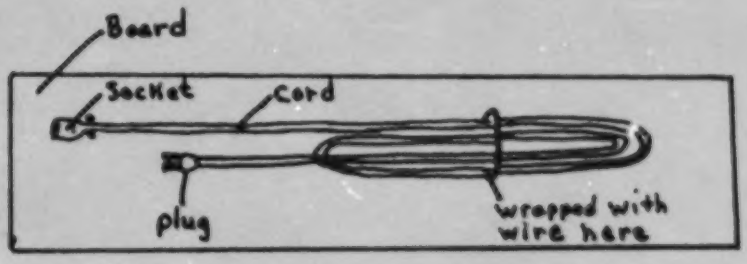
3. Repeat the above procedure for the other terminal screw.

F. Slide cap up the cord over the bottom of the socket.

G. Replace outer covering over the socket and snap into socket cap.

*H. Using a jig, rewrap lamp cord and secure the cord loops with a small wire tie.

I. Repack lamp cords into carton -- 18 cords on each layer -- 20 layers per carton -- total 360 per carton.



Dots represent nails which have been driven through bottom of board -- points have been rounded off for safety.

Prerequisites

I. Good visual acuity

II. Fine motor coordination

III. Thumb-finger opposition

IV. Use of both hands

V. Ability to use screwdriver or any other small tools such as pliers

Buffing Telephone Casings

I. Truck Drivers Helper I

A. Prerequisites

1. Has to be strong

2. Has to be able to lift

B. Equipment Needed

1. No special equipment used

C. Job Description

1. Lift up box

2. Turn toward truck

3. Hand box to helper II

II. Truck Driver's Helper II

A. Prerequisites

1. Has to be strong

2. Has to be able to lift

3. Has to be able to load truck properly

B. Equipment Needed

1. Truck

C. Job Description

1. Take box from helper I

2. Turn into truck

3. Walk to front of truck

4. Place boxes in truck in an order that will fit most boxes

5. Walk to back of truck to receive another box

III. Sorting Phone Casings by Color and Style

A. Prerequisites

1. Has to know the different styles of phones; i.e., wall housings, desk housings, telephone handles

2. Has to be able to judge phone that needs to be buffed

3. Has to know colors

B. Equipment Needed

1. Boxes

C. Job Description

1. Open box

2. Pick up phone

3. Look at phone

4. Put phones in proper box

a. Put same color and style in the same box

b. put the badly scratched phones in a box that is sent back to the company to be spray painted or rejected

IV. Buffing Telephone Casings

A. Prerequisites

1. Normal eyesight

2. Gross motor coordination

3. Fine motor coordination

a. eye-hand coordination

4. Hand-finger dexterity

5. Judgment in relationship to quality, color, and styles

B. Equipment Needed

1. Buffing Machine -- a motorized cloth wheel that turns at a high speed

a. Safety Features

(1) The machine has a shield over the wheel for protection

(2) The machine operator sits on a high stool so that the operator's face is above wheel

(3) The machine has metal bars running vertically along side of wheel to prevent pieces of compound or phones from flying out at the operator

(4) Stop buttons are beside the operator to stop the machines in an emergency

2. Buffing Compound -- a hard square stick that is applied to the buffing wheel to prevent the phones from burning.

3. Sand Paper -- used to clean cloth wheel.

4. Scraper -- to scrape labels off phones.

5. Tooth Brush -- used to clean corners of phones.

6. Soft Cloth -- used to shine phones.

7. Wooden Jigs -- used to fill the casings for easier handling and for protection.

C. Job Description

1. Sit at machine.

2. Place feet flat on floor.

3. Turn on machine.

4. Pick up phone.

5. Put phone over jig.

6. Look at phone for labels.

7. Pick up scraper.

8. Scrape off labels.

9. Put scraper down.

10. Pick up compound.

11. Apply compound to wheel.

12. Put compound down.

13. Hold phone up against wheel, turning it to get all sides.

14. Pull phone from wheel.

15. Pick up tooth brush.

16. Clean corners with tooth brush.

17. Put tooth brush down.

18. Pick up soft cloth.

19. Wipe phone off with cloth.

20. Put cloth down.

21. Look phone over.

22. Take phone off of jig.

23. Put phone down to be checked.

24. Clean wheel with sand paper.

V. Phone Inspector

A. Prerequisites

1. Normal eyesight.

2. Judgment.

B. Equipment Needed

1. Plastic bags.

2. Soft cloth.

C. Job Description

1. Walk to phones.

2. Pick up phones.

3. Inspect the phone.

   a. If phone is of poor quality, hand it back to operator

   b. If phone is of good quality, proceed to step 4.

4. Pick up plastic bag.

5. Put phone in plastic bag.

6. Put bagged phone down to be packed.

VI. Phone Packer

A. Prerequisites

1. Ability to count.

2. Know colors.

3. Has to know different styles of phones.

4. Ability to write.

5. Has to be able to lift.

B. Equipment Needed

1. Box.

2. Phones to be packed.

3. Magic marker.

4. Tape machine.

C. Job Description

1. Make box.

2. Walk to phones.

3. Pick up phones.

4. Place phones in box.

5. Seal box with tape.

6. Mark box by color, style, and quantity.

7. Put box in storage area for shipment.

Breaking

I. Prerequisites of the Breaker

A. Terms

1. Bodies -- flat, unfolded, and unstapled fiberboard cartons that are marked with the brand name, quantity, and name of the product.

2. Ends -- rectangular fiberboard with handle opening, advertising the product.

3. Inserts -- rectangular sectional cardboard that is placed inside the stapled carton.

B. Judgment

1. Knows what type of carton to break.

2. Knows when to supply the stitcher.

3. Knows what to do with the oversupply of broken bodies and ends.

4. Knows what to do with cut wires.

C. Safety

1. Knowledge of and uses proper procedures to pick up heavy and oversized objects.

2. Knows how to use pliers.

3. Knows how to break bodies without cutting or straining oneself.

4. Knows how to carry broken bodies to the stitcher.

5. Knows where to place the broken bodies.

II. Equipment and Supplies

A. Broom

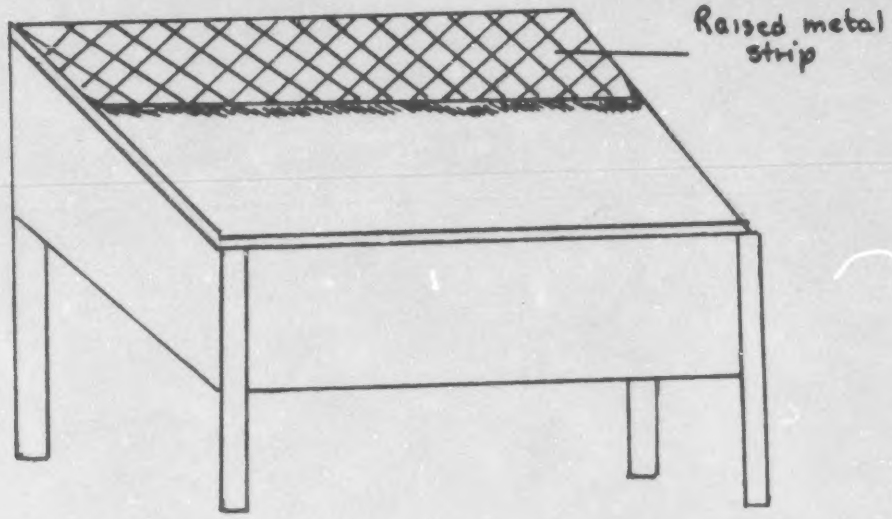
B. Pliers

C. Ends

D. Bodies

E. Breaking Table

-- flat rectangular table with a raised metal strip that is adhered to the table top. The length of the body is placed under the strip to aide the breaker in folding.



III. Responsibilities of the Breaker

A. Finds out what type of carts are being re-assembled.

B. Gathers his supplies.

C. Breaks the bodies (bends and folds the cartons) on the breaking table, using the right hand for leverage and the left for pressure. Reverse the procedure for a left-handed employee.

D. Stacks the broken bodies.

E. Places the correct ends in a central area.

F. Replenishes the stitchers with bodies and ends.

G. Keeps his area free from cut wires, torn plastic wrappings, and unused bodies.

Stitching

I. Prerequisites of the Stitcher

A. Terms

1. Pliers.

2. Conveyor belt.

3. Stitcher -- machine that places staples into an object and is operated or controlled by a foot lever.

4. Staple lifter -- a one-tined instrument that is used to raise the staple from the surface.

5. Ends -- rectangular fiberboard with handle opening and advertising the name of the product.

6. Bodies -- flat, unfolded, broken and unstapled carton.

B. Judgment

1. Knows and practices reordering of supplies.

2. Knows when a staple is placed incorrectly.

3. Can remove an improperly placed staple.

4. Recognizes a bad staple.

5. Is capable of removing a badly shaped staple.

C. Safety

1. Knows and wears safety glasses and earphones or cotton placed in the ear.

2. Wears a sturdy, heavy-duty pair of shoes.

3. Knows and practices proper placement of his supplies.

4. Knows and uses proper folding procedure of bodies.

5. Knows and practices proper placement of fingers when operating machinery.

6. Knows and practices how to thread a machine correctly.

7. Knows and practices what to do with machine failure.

   a. Repairing of simple breakdowns

   b. Repairing of major breakdowns

II. Responsibilities of the Stitcher

A. Finds out the type of carton to be assembled.

B. Orders bodies.

C. Gathers a setup of ends from the central area.

1. Places the correct ends in his supply box.

2. Places the box on the left side of the stitching table. This is reversed for a left-handed person.

D. Checks the working order of the machine.

1. Switching the lever on and off.

2. Stapling a few staples.

3. Re-threads the machine.

E. Folds the flap of the lid of the body.

F. Places the staples (1) at each end of the flap.

G. Places the proper amount of staples (3) between the two ends.

H. Prepares and finishes the other flap on the carton.

I. Folds the body into three sections.

J. Inserts the end under the edges of the body.

K. Inserts (2) staples at the top of each end. These are closely placed.

L. Staples (4) down from the top of the end and places (3) staples across the bottom of the end and (4) staples up to the staples at the top of the end.

M. Checks for incorrect placement of staples.

N. Removes poorly placed staples with lifter.

O. Replaces with correctly placed staples.

P. Repeats procedures J through M on the other end of the carton.

Q. Places the stapled carton on the conveyor belt.

R. Calls for supplies when needed.

The Lineman

I. Prerequisites of the Lineman

A. Terms

1. Line -- assemblyline.

2. Conveyor -- conveyor belt on which finished boxes move from one area to another.

3. End -- rectangular fiberboard with handle opening and advertising the product.

4. Bodies -- flat, unfolded, broken and unstapled fiberboard cartons.

5. Insert -- rectangular sectional cardboard that is placed inside the stapled carton.

6. Imports -- heavier weight inserts.

B. Judgment

1. Has knowledge of and practices the proper stacking techniques for carrying of boxes.

2. Has knowledge of and practices carrying several boxes from one place to another.

3. Knows and practices proper storage techniques of boxes for storage.

C. Safety

1. Proper placement of inserts into the boxes without holding up the line.

2. Proper closing of the carton lid.

3. Proper stacking of boxes.

II. Equipment and Supplies

A. Pliers

B. Cart to hold inserts

C. Inserts

D. Conveyor belt

III. Responsibilities of the Lineman

A. Gets the inserts from storage area.

B. Places them in the cart at the proper work area.

C. Checks boxes for correct amount and placement of staples.

D. Opens inserts.

E. Places inserts into box.

F. Closes the box lid.

G. Stacks several boxes.

H. Carries the boxes to the storage area.

Driver and Assistant

I. Prerequisites of the Driver and the Assistant Driver

A. Terms

1. Invoice slip.

2. Ends.

3. Bodies

B. Judgment

1. Gives correct backing in directions.

2. Knows and uses proper stacking techniques for various sized cartons.

C. Safety

1. Practices good driving skills.

2. Adheres to all traffic rules and regulations.

3. Knows and practices how to stock the truck to capacity with finished beer cartons.

4. Knows and practices how to reach, bend, and lift correctly.

II. Equipment and Supplies

A. Truck

B. Cartons

C. Invoice slip

D. Skids

-- wooden platforms on which cartons are stacked in the truck and are removed by inserting a forklift in between the slots.

III. Responsibilities of the Driver and the Assistant Driver

A. Give backing in directions to the truck driver.

B. Place correctly the skids in the truck compartment.

C. Call for the order.

D. Stack properly the boxes on the skids.

E. Pick up invoice slip.

F. Lock the truck compartment.

G. Deliver the boxes and invoice slip.

H. Unload the boxes.

I. Return truck to workshop.

Clipping Service

Handicapped employees read approximately 150 newspapers and clip important news items for approximately 82 clients.

A wide variety of newspapers are utilized from Pennsylvania, Ohio, and West Virginia, mainly encompassing nineteen counties in Pennsylvania.

Papers included are: daily, weekly, periodicals, green sheets, nationality newspapers, religious newspapers, etc.

Clients utilizing this service include: department stores, banks, public utilities, educational institutions, cultural groups, hospitals, professional societies, industries, radio and television stations, recreational services, shopping centers, etc.

The clipping service provides a training program for the employees. The low pressure work atmosphere enables the em-

ployees to become multi-skilled within the department.

Newspaper clippings are mailed weekly and bids daily.

I. Newspaper Sorter

A. Job Description

Opens mail bags, unfolds newspapers, and sorts and stacks them by counties, records the date and number of copies on a file card for inventory purposes.

B. Task Analysis

1. Opens mail bags.

2. Removes papers and unfolds them.

3. Sorts papers by counties.

4. Records the date and number of copies on a file card for inventory purposes.

5. Sorts papers for individual readers to pick up.

C. Qualifications

1. Manual dexterity.

2. Ability to record dates.

3. Filing alphabetically.

4. Retention of names of the counties in which the papers are printed.

5. Ability to sort alphabetically.

6. Good vision.

II. Readers

A. Job Description

Reads the newspaper and identifies and marks the articles to be clipped, identifies, cuts, and records bids in ledger.

B. Task Analysis

1. Reads specifically assigned newspapers.

2. Identifies the particular client or clients mentioned in the article by underlining the name of the client with a ruler and red marking pencil.

3. Marks the article to be clipped by a ruled red line across the top and bottom of the article.

4. Identifies articles to be copied by rough cutter by indicating this on the front page and placing them in a specified box. Articles are to be copied if the following circumstances exist: if two articles are back to back, and if more than one client is mentioned in the article. It must be noted if clients will only accept original copies.

5. Indicates to the rough cutter that there is an article to be clipped on that page by placing a checkmark in the top right-hand corner of the newspaper page.

6. Proof reads or scans entire paper for re-check of identifying articles.

7. Notes the total number of articles to be clipped in the newspaper in the upper right-hand corner of the front page.

8. Reader initials upper right-hand corner for identification purposes.

9. Presents paper to rough cutter.

C. Qualifications

1. At least sixth grade reading level.

2. Good concentration and retention.

3. Visual strength for prolonged reading.

4. Ability to draw straight lines with ruler.

5. Ability to count and total.

6. Ability to cut with scissors.

III. Rough Cutter

A. Job Description

Proof reads and checks entire paper, roughly cuts out articles, operates copy machine, and paper clips together continued articles.

B. Task Analysis

1. Proof reads entire paper for recheck of identifying articles.

2. Roughly cuts out specified articles by cutting outside the marked ruled red lines.

3. Paper clips together continued articles.

4. Operates copy machine to make copies of articles if needed.

5. Re-marks copied articles with ruler and red pencil as specified for fine cutting.

6. Cuts out the name of the paper and date and clips it on top of the roughly cut-out articles and copies.

7. Recounts number of articles clipped with number of articles listed by reader on front page of paper.

8. Presents roughly cut articles to fine cutter.

C. Qualifications

1. At least sixth grade reading level.

2. Good concentration.

3. Visual strength for prolonged reading.

4. Ability to cut with scissors.

5. Ability to operate copy machine.

6. Ability to draw straight lines with ruler.

7. Ability to count and total.

8. Recognition of names of papers.

9. Recognition of months and dates.

IV. Fine Cutter

A. Job Description

A daily volunteer who cuts out the article precisely as marked, rechecks the number of articles clipped with the number listed on the heading by the reader, and sorts articles for labelers.

B. Task Analysis

1. Cuts out articles precisely as marked.

2. Recounts and checks number of articles clipped with number listed by reader and rough cutter on heading.

3. Re-clips name of paper and date on top of the articles.

4. Sorts articles by number for the following labelers:

a. Typist labeler

If nine or less articles are to be labeled, the typist labeler types out the labels.

b. Machine labeler

If ten or more articles are to be labeled, they are labeled by machine.

5. Presents clipped and sorted articles to the proper labeler.

C. Qualifications

1. Visual acuity.

2. Fine finger and hand dexterity.

3. Eye-hand coordination.

4. Ability to cut with scissors.

5. Ability to count and total.

V. Labeler

A. Job Description

Types or machine prints on the Easter Seal Clipping Service label the name and date of the newspaper for each article clipped.

B. Task Analysis

1. Typist labeler

a. Types for each article the name of the paper and date on the Easter Seal Clipping Service label.

b. Rechecks labels. Name and date of paper must correspond with the name and date of paper listed on labels.

c. Slips the labels under the paper clip but on top of the heading of the clippings.

d. Presents the labels and clippings to the paster.

2. Machine labeler

a. Machine prints for each clipping the name and date of the newspaper on the Easter Seal Clipping Service label.

b. Rechecks labels. Name and date of paper heading must correspond with the name and date of paper listed on labels.

c. Slips the labels under the paper clip but on top of the heading of the clippings.

d. Presents the labels and clippings to the paster.

C. Qualifications

1. Typist labeler

a. Fine finger and hand dexterity.

b. Eye-hand coordination.

c. Ability to type.

2. Machine labeler

a. Set type of date in metal printing block and insert into machine.

b. Set automatic counter on labeling machine.

c. Replace rolls of labels in machine.

d. Operate labeling machine.

e. Operate labeling machine manually.

f. Fine finger and hand dexterity.

g. Eye-hand coordination.

VI. Paster

A. Job Description

Verifies that paper heading and date correspond to data on labels; pastes a label on each clipped article; and when required pastes clipped articles on plain white paper and mails them to client; pastes together small continued articles and staples together larger continued articles.

B. Task Analysis

1. Checks that paper heading and data correspond to data on labels.

2. Pastes a label on each clipped article.

3. Pastes together small articles which are continued on another page.

4. Staples together longer articles which are continued on another page.

5. Will do fine cutting, if capable and time permits.

6. Pastes articles on plain piece of white paper and mails to client when required.

7. Places clipped articles with labels into file box.

8. Presents file box to file clerk.

C. Qualifications

1. Fine finger and hand dexterity.

2. Eye-hand coordination.

3. Neatness in pasting.

4. Limited reading ability.

5. Physical strength to staple.

6. Ability to cut with scissors.

VII. File Clerk

A. Job Description

Files clipped articles into alphabetically-listed client pigeon holes.

B. Task Analysis

1. Empties file box and returns it to paster.

2. Folds clipped articles to fit the pigeon holes.

3. Files each clipped article in the appropriate alphabetically-listed client's pigeon hole.

C. Qualifications

1. Can file alphabetically.

2. Eye-hand coordination.

3. Ability to fold clippings.

4. Ability to withstand prolonged standing.

5. Visual acuity.

VIII. Mailing Clerk

A. Job Description

Removes clipped articles from pigeon holes; counts and records number of clipped articles into account book for billing purposes; stuffs envelopes; affixes gummed client address labels to envelopes; weighs envelopes; hand stamps third class, bulk mailing rate; affixes stamps; separates letters; and mails letters.

B. Task Analysis

1. Check that clipped articles have been filed into the correct pigeon hole by removing them from the pigeon holes individually.

2. Count clipped articles for billing purposes.

3. Record number into account book; record mailing date and number of clipped articles mailed.

4. Fold clipped articles and stuff into envelopes.

5. Affix gummed client address labels to center front of envelope.

6. Weigh envelopes.

7. Stamp third class bulk mailing rate on upper right-hand corner of envelopes.

8. Affix stamps to envelopes.

9. Separate mail into two piles.

a. Local or downtown clients are hand delivered by employees.

b. All others are placed in box for mailing.

10. Mail letters to clients.

C. Qualifications

1. Limited reading ability.

2. Fine finger and hand dexterity.

3. Visual acuity.

4. Eye-hand coordination.

5. Limited bookkeeping for billing purposes.

6. Ability to stuff envelopes.

7. Ability to paste on labels.

8. Ability to use hand stamp of newspaper names.

9. Recognition of names of clients located in Pittsburgh.

Information Source: The Easter Seal Society
Easter Seal Clipping Service
110 Seventh Street
Pittsburgh, Pa. 15222

Rebuilding Engine Starter Plates

I. Tasks

A. Inspection I (Gross Sorting)

1. Separate plates into two groups:

a. To be totally rebuilt.

b. To be partially rebuilt.

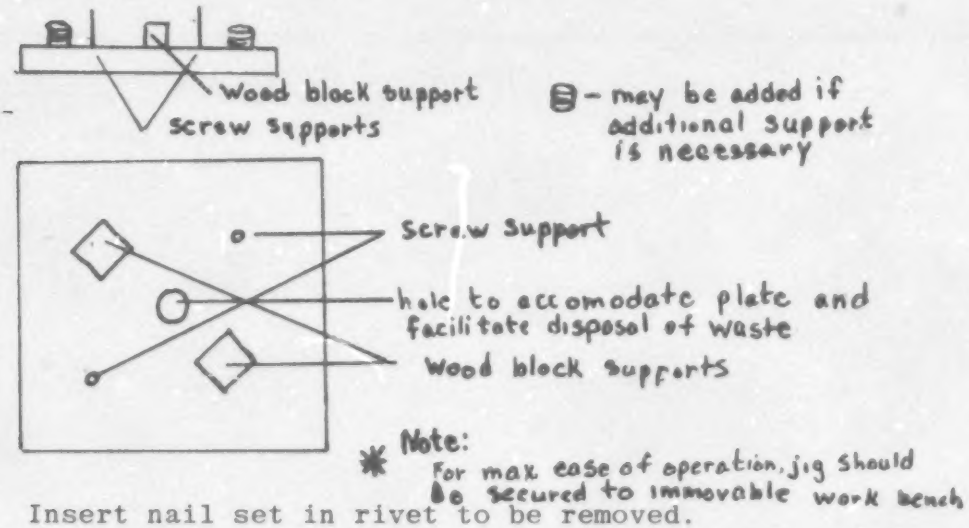
2. Pass 1a. through assembly line without further inspection.

3. Inspects and color codes 2b.; i.e., designates parts to be removed and replaced.

4. Passes 2b. on to assembly line.

B. Removal of Designated Parts

1. Place plate in jig (see illustration).


Wood block support
Screw supports
- may be added if additional support is necessary
Screw Support
hole to accomodate plate and facilitate disposal of waste
Wood block supports
Note:
For max ease of operation, jig should be secured to immovable work bench

2. Insert nail set in rivet to be removed.

3. Using maximum force, strike nail set with hammer until rivet falls free.

4. Repeat steps 2 and 3 until all rivets to be removed have been forced free.

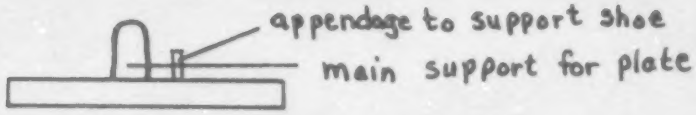
5. Pass plate on to rivetor.

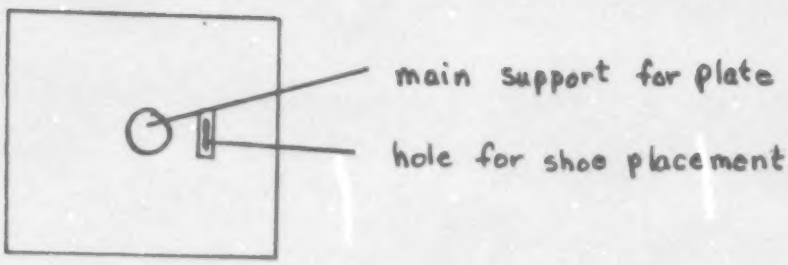
C. Reclaimation of Salvageable Parts

1. Sort salvageable parts from unsalvageable scrap of step B.

D. Riveting Operation I

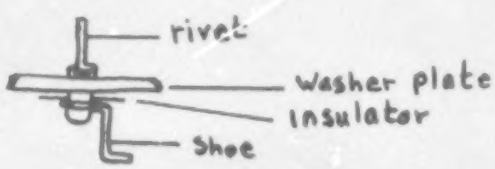
1. Set shoe with insulator on riveting jig.





2. Place plate on jig in "upside down" position.

3. Insert proper size rivet with insulating washer through hole in plate matching hole in shoe and insulator.



4. Pop rivet shoe to plate.

   a. Place pop rivet gun flush on rivet and plate.

   b. Press handles of gun together keeping gun flush on rivet and plate.

   c. Repeat 4b. until sharp snapping sound is heard.

d. Repeat steps 1 to 4 until all necessary riveting is completed.

5. Pass plate to rivetor II.

E. Riveting Operation II*

1. Set shoe without insulator on jig.

2. Place plate on jig in "upside down" position.

3. Insert proper size rivet through hole in plate matching hole in shoe.

4. Pop rivet shoe to plate (see procedure D4 a-d).

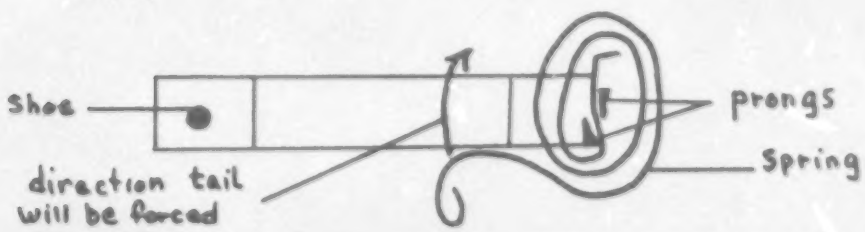
5. Pass plate to spring attacher.

*NOTE: When enough expertise has been developed it is possible to combine riveting operations.

F. Spring Attachment (Coil)

1. Place plate on jig (see illustration for B1.

2. Slip spring center between prongs on shoe.



3. Grasp tail of spring (coil) with pinch nose pliers.

4. With twisting motion, force spring tail past shoe until tail bisects open area of shoe.

5. Release pliers allowing tail to snap into place.

6. Repeat steps 2 to 5 until all necessary springs (coils) have been attached.

7. Pass plate to inspector II.

G. Inspection II

1. Place plate on jig.

2. Attach clip A of jig on plate.

3. Attach clip B of jig on shoe with insulator.

4. Approve or reject plate.

5. If approved, repeat steps 2 to 4 for other shoe with insulator.

6. If approved, install bushing.

a. Place bushing in well.

b. Place wooden set on bushing.

c. Strike set with hammer until bushing is in place.

7. Pass to packager.

8. If rejected, return to inspector I for color coding.

H. Packaging

1. Place determined number of completed plates in box.

2. Seal box.

3. Stack in designated area to await shipment.

II. Prerequisites

A. Academic

1. One-to-one correspondence.

2. Matching.

3. Color recognition.

4. Use of hand tools.

   a. Nail set

   b. Hammer

   c. Pop rivet gun

   d. Pinch nose pliers

5. Basic understanding of electricity.

6. Basic understanding of shop safety.

B. Physical

1. Good eye-hand coordination.

2. Use of two hands (except inspection II).

3. Good strength in upper trunk.

4. Fair to good visual skills.

5. Able to make both gross and fine discrimination judgments.

C. Adaptations

1. For spring attachment, plate may be hand held to facilitate twisting of spring.

2. Evaluation done on basis of ability, accuracy, and productivity of individual.

3. Production may be done on an individual or assembly line basis. Steps may be combined to shorten process.

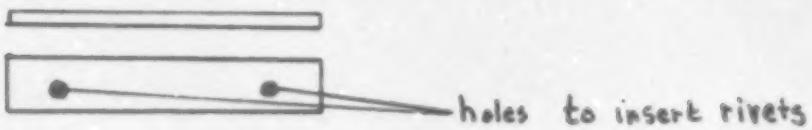
D. Safety

1. Impress upon clients tools are not toys.

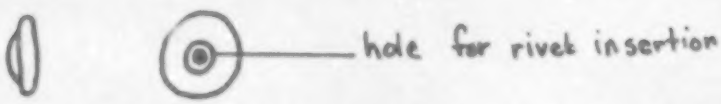
2. Instruct clients to keep thumbs from between handles of pop rivet gun.

E. Illustrations of Plate Parts

1. Insulator



2. Washer



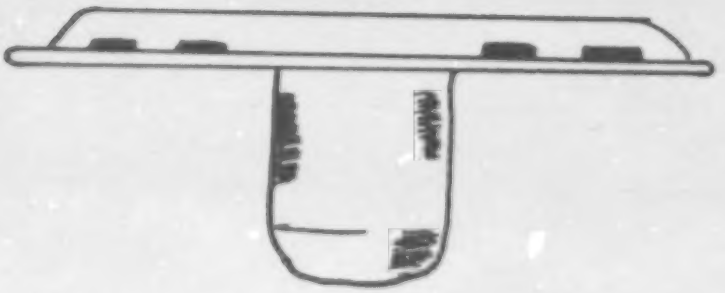
3. Bushing

4. Spring

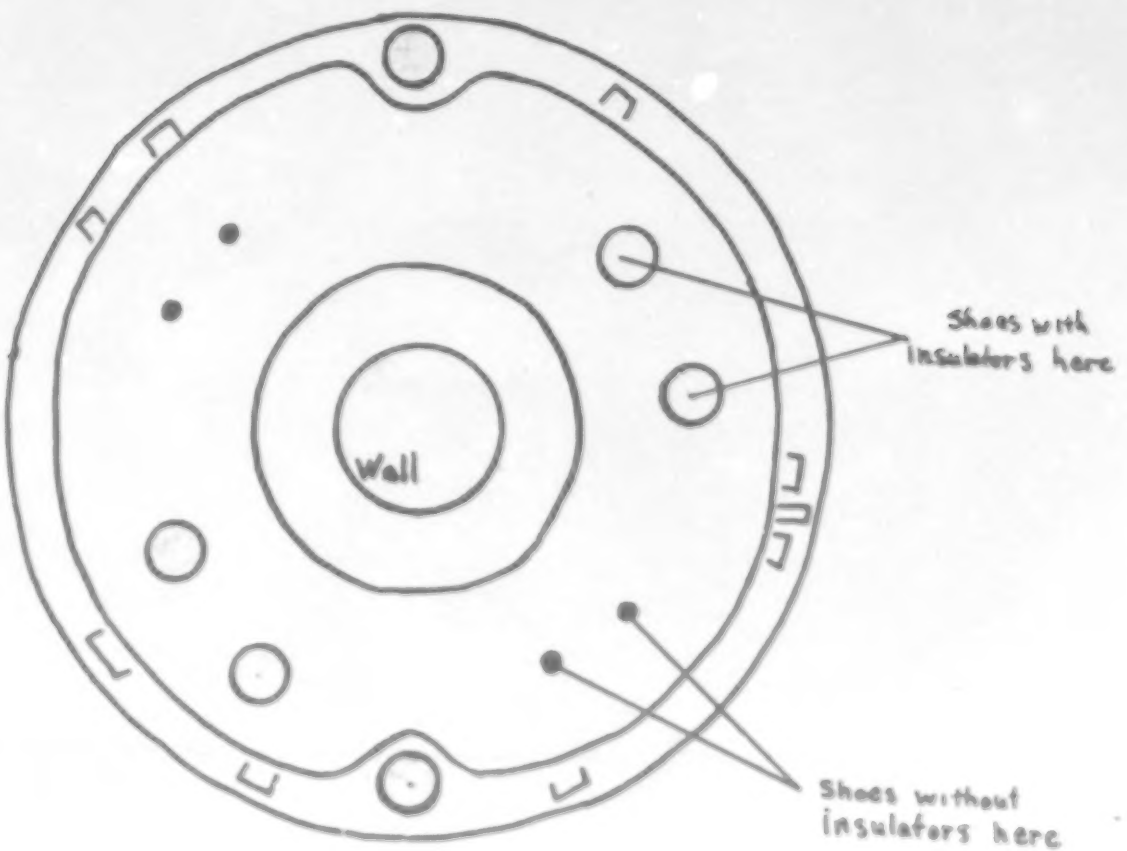
5. Shoe

6. Rivet

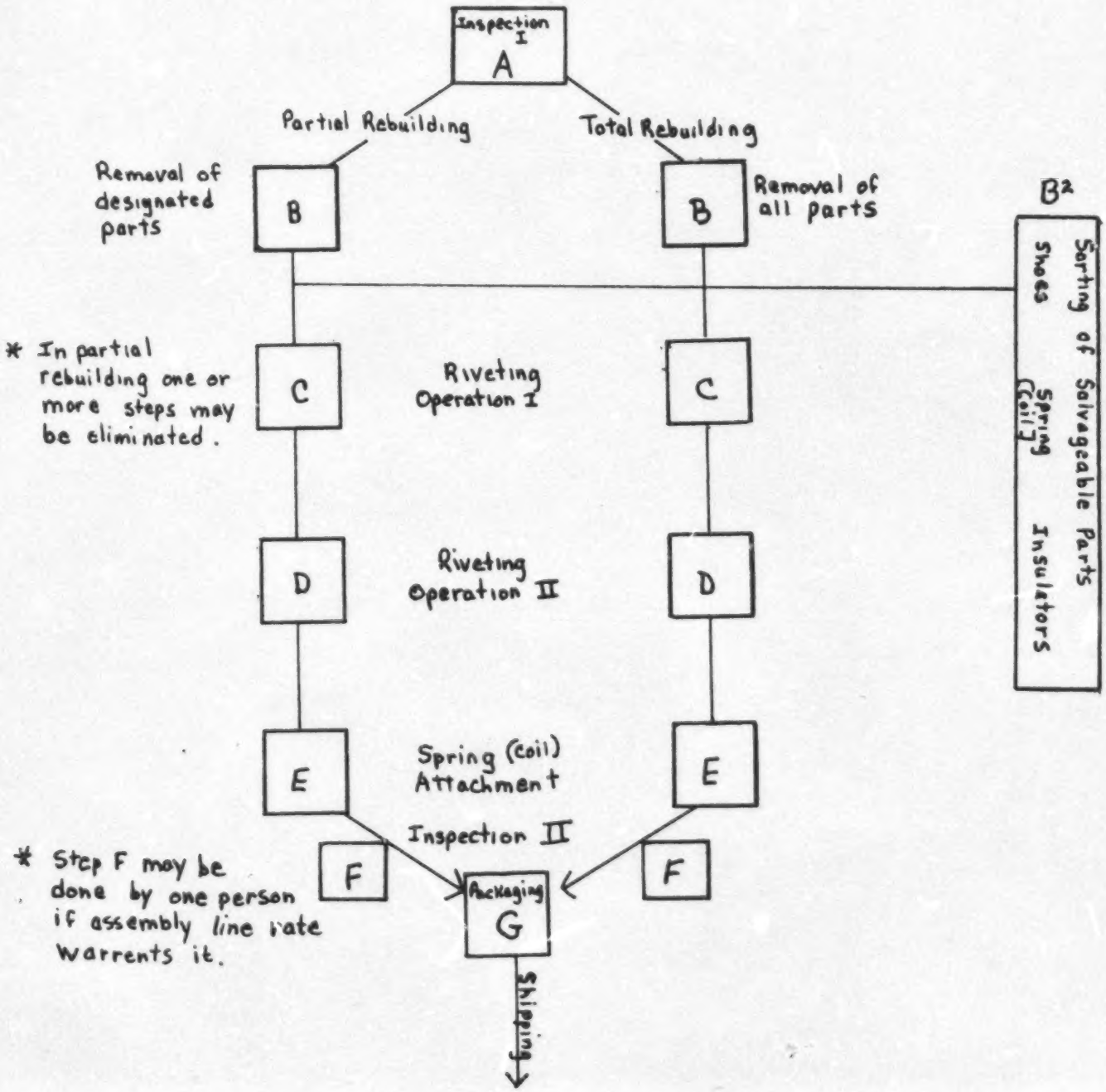
7. Plate



* the shoe is a perfect circle



F. Assembly Line Flow



*Letter Code From Task Analysis

Mailing Operations

Following are two examples of mailing operations. The first example is an analysis of piece work, in which the entire mailing operation is completed by one individual; the second example is an assembly line procedure, in which each worker is responsible for only one step of the entire operation.

I. Prerequisites

A. Good visual motor coordination.

B. Left-right orientation.

C. Concept of directionality.

D. Be able to follow simple directions.

E. Size, color, shape discrimination.

F. Sorting skills.

G. Be able to count materials from 1 to 25.

H. Number recognition skills.

II. Sub-Skills

A. Folding.

1. Single

2. Double

B. Unfolding.

C. Counting material.

D. Collating.

E. Inserting.

F. Tearing on perforated line.

G. Organization of similar material.

H. Proper use of sealing bottle.

I. Centering.

J. Closing envelope.

1. Tuck

2. Seal

K. Sorting envelope according to zip codes.

Sample Mailing for a Fund Drive

JOB DESCRIPTION: Mailing materials for a fund drive. (This particular job can be performed by one person from beginning to end).

I. Materials

A. One form letter

B. Four money envelopes

C. Fifteen flyers

D. One total sheet

E. One volunteer tag

F. One large mailing envelope

G. One smaller return envelope

H. One seal bottle

I. One address label with carbon duplicate

J. One paper towel

II. Procedure

A. Form letter is double folded.

B. Fifteen flyers, four money envelopes, one total sheet, and one volunteer tag are counted out.

C. Form letter is unfolded and counted material is collated and put neatly into the form letter.

D. Form letter is re-folded.

E. Material is inserted into a return envelope.

F. The return envelope is closed by tucking the flap.

   1. The employee should now have a large address envelope, a smaller stuffed return envelope, an address label with a carbon duplicate, a seal bottle (filled with water), and a paper towel.

G. The address label, when attached to others, must be torn on the perforated line.

H. The carbon address label (differentiated from the original by the upper portion being colored blue) is dampened with seal bottle and properly centered and glued onto the mailing envelope.

I. The original address label is dampened with the seal bottle and properly centered and glued onto the return envelope.

   1. Address label should not be soaked with water.

   2. The wetting must be done from corner to corner so that there are no loose ends.

   3. Address label must be applied with directionality so that the label is not wrinkled (applying hand pressure left to right, or top to bottom).

J. Excess water must be wiped with a paper towel.

K. The return envelope is inserted into the mailing envelope upside down.

   1. The purpose of this procedure is so that the information does not fall out.

L. The mailing envelope is closed by tucking the flap.

M. Upon completion of the above procedures, the envelopes are sorted by zip codes for mailing.

Standard Steps in Mailing Operations -- Assembly Line

A. Hand Collating.

1. Two sheets

*2. Three sheets

3. Multi sheets

B. Folding.

*1. Single

2. Double

3. Quarter

C. Stapling.

D. Inserting

*1. One piece

2. Two pieces

3. Three pieces

4. Multi pieces

E. Labeling

1. Paste

2. Perforated

*3. Self-stick

F. Hand Stamping.

*1. Pre-sealed stamps

2. Regular stamps

*Used as examples for task analysis.

G. Closing envelopes.

1. Tuck

*2. Seal

III. Task Analysis of Mailing Operations

A. JOB: Hand Collating (Three Sheets)

1. Task

Collating three sheets in given order.

2. Task Analysis

a. Arrange materials in order face down.

b. Pick up page one; pick up page two, placing it under page one; pick up page three, placing it under page two.

3. Prerequisites

a. Neatness
b. Organization
c. Accuracy
d. Ability to follow directions
e. Concentration
f. Speed

B. JOB: Folding (Single Fold)

1. Task

Folding one sheet of paper in half by width.

2. Task Analysis

Fold one sheet of paper in half by width, making sure the corners meet. Crease the paper from the center to the ends.

3. Prerequisites

a. Quantity

b. Quality
c. Accuracy
d. Neatness
e. Concentration to task
f. Eye-hand coordination
g. Bi-manual dexterity

C. JOB: Stapling

1. Task

Stapling three sheets of paper in the upper left-hand corner.

2. Task Analysis

Make sure the pages are face up, in proper order, and all corners are even. Staple together in upper left-hand corner.

3. Prerequisites

a. Eye-hand coordination
b. Following directions
c. Concentration
d. Organization
e. Hand strength
f. Manual dexterity
g. Visual acuity

D. JOB: Inserting (one piece)

1. Task

Insertion of pre-addressed card into a window envelope. The address should be upright and showing through the window.

2. Task Analysis

a. Arrange materials.

b. Place envelopes and cards upside down on table, with cards being placed above envelopes.

c. Pick up card and insert in envelope.

d. Stress that cards and envelopes remain face down during insertion.

3. Prerequisites

a. Organization
b. Quality
c. Quantity
d. Ability to follow directions
e. Attention span
f. Concentration
g. Work tolerance
h. Handling

E. JOB: Labeling (self-stick)

1. Task

Application of self-stick mailing labels to envelopes.

2. Task Analysis

a. Peel label from backing.

b. Apply label to center of envelope.

3. Prerequisites

a. Ability to follow verbal directions
b. Speed
c. Fine finger dexterity
d. Eye-hand coordination
e. Concentration
f. Visual acuity

F. JOB: Hand Stamping (pre-sealed stamps)

1. Task

To place pre-sealed stamp on upper right-hand corner of first class envelope.

2. Task Analysis

Peel pre-sealed stamp from sheet and affix to upper right-hand corner of envelope.

3. Prerequisites

a. Eye-hand coordination
b. Following directions
c. Concentration
d. Neatness
e. Organization
f. Visual acuity

G. JOB: Closing Envelope (sealing)

1. Task

Moisten flap of envelope and seal.

2. Task Analysis

a. Moisten sponge in water.

b. Moisten flap of envelope with a sponge, being careful not to saturate envelope.

c. Fold over flap and seal.

3. Prerequisites

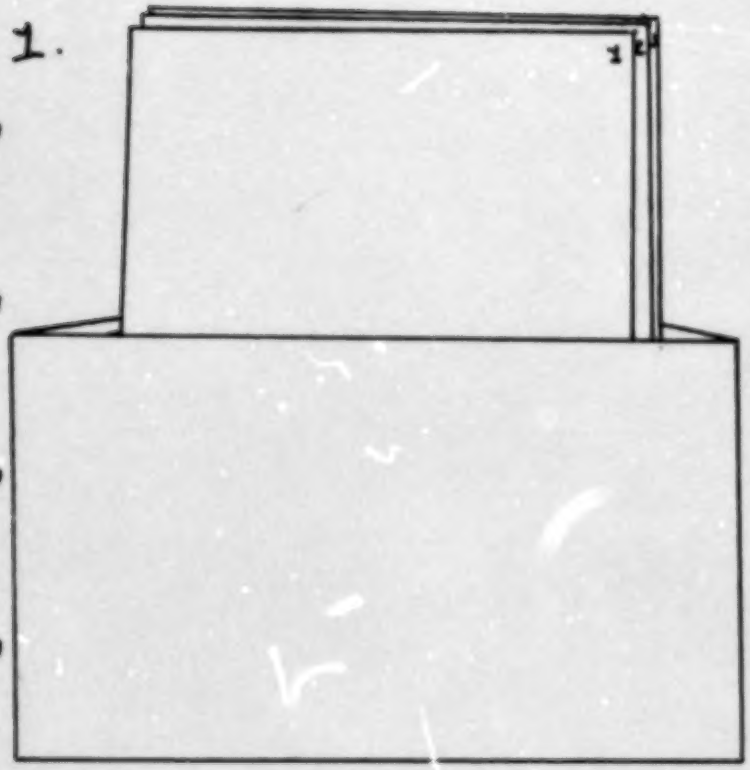
a. Following directions
b. Neatness
c. Eye-hand coordination
d. Finger dexterity

NOTE: Analyses gleaned from discussions with work counselors, evaluators and personal observations.

IV. Samples

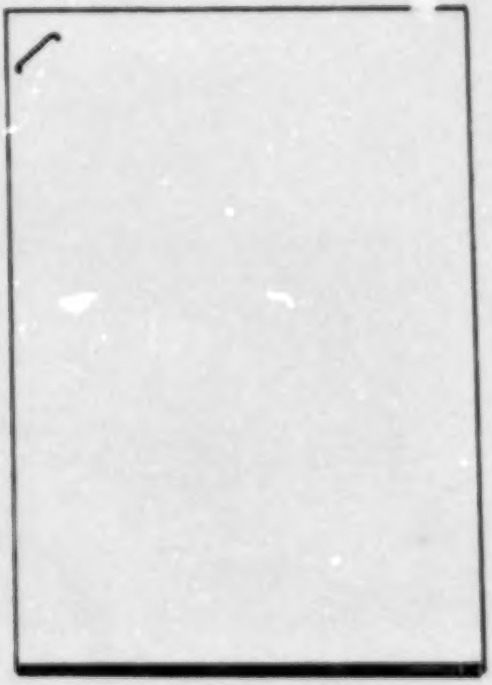
See following illustrations.

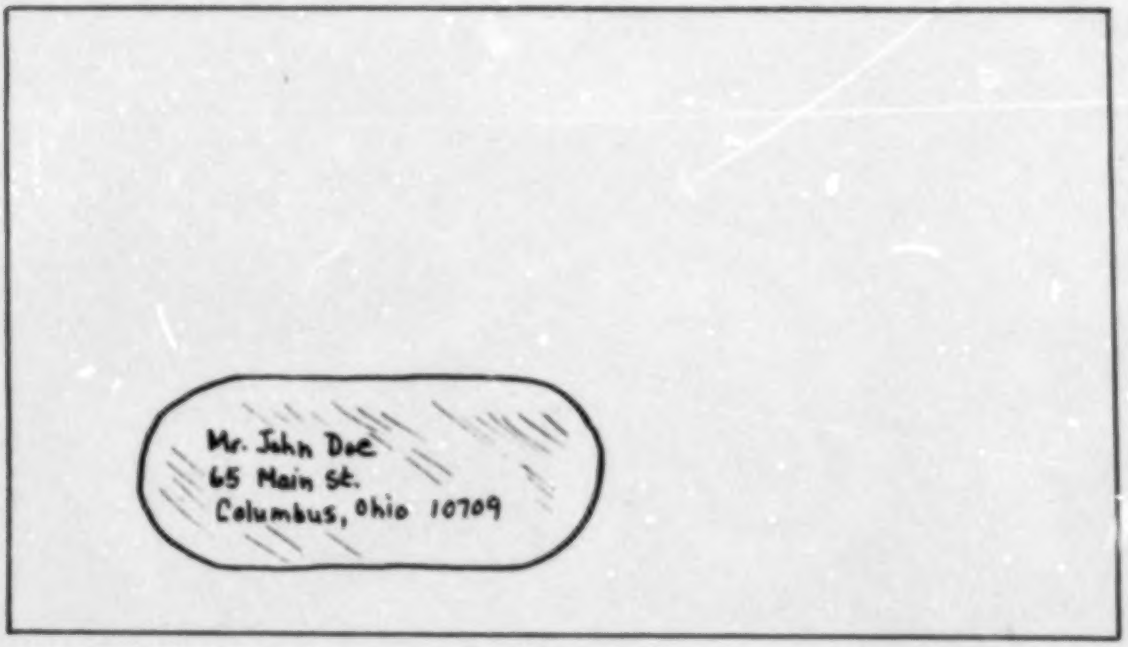
1.

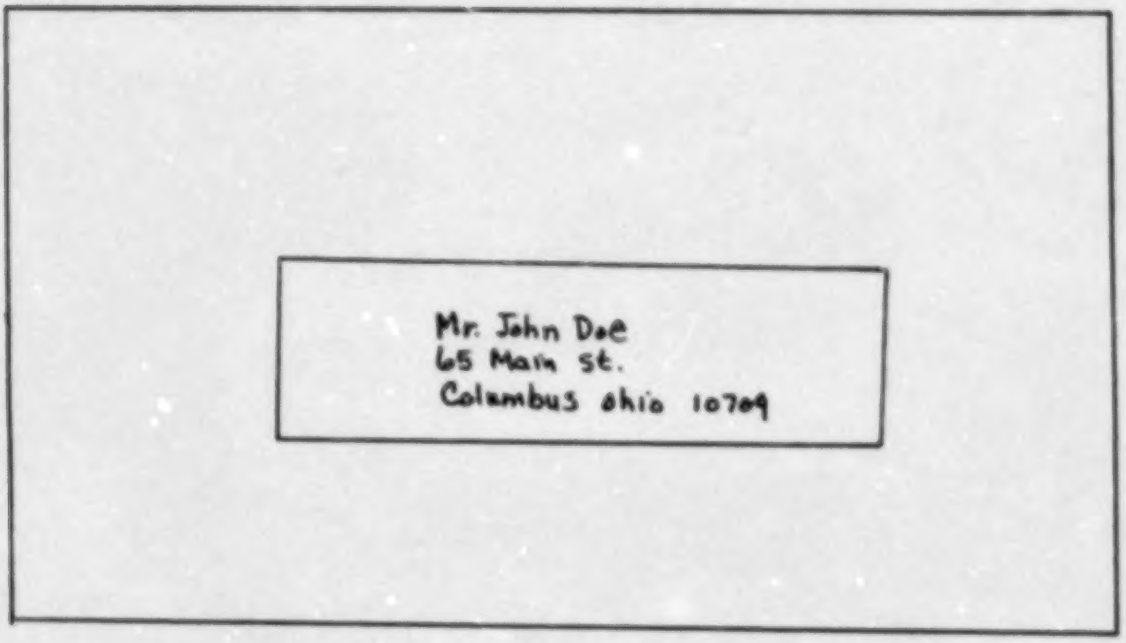


2.

3




Mr. John Doe
65 Main St.
Columbus, Ohio 10709


Mr. John Doe
65 Main St.
Columbus ohio 10709

V. Adaptations for Mailing Operations

Mailing operations can be adapted to persons with serious physical and mental defects by using an assembly line procedure. This is due to the fact that each individual proceeds at his own rate and is responsible for only one step in the operation.

For the piece work operation, a more adaptive person, versed in the skills of mailing operations, is needed because he must complete a job from beginning to end.

Printing and Packaging Calendars

In the job analyzed, due to the involved set-up, adaptations can be made on each job to meet the needs of the handicapped workers.

This job consists of printing, collating, cutting, and packing of calendars. Since the printing area was not observed, it will not be included in the following analysis. Prerequisites vary from job to job and adaptations can be made for each individual.

I. JOB TITLE: Pre-loader (Supplier)

A. Prerequisites

1. Ability to lift.

2. Ability to walk.

3. Ability to carry.

4. Ability to read numbers.

5. Ability to match numbers.

6. Ability to recognize a need for more supplies.

7. Ability to neatly place sheets on pile at station.

B. Task

1. Set-up

a. Go to pallet and choose appropriate sheets.

b. Carry sheets to appropriate station and match the numbers.

c. Take a blue sheet and place it on the station sheets.

d. Place new sheets on top.

2. Checking

a. Check supplies at each station.

b. When blue sheet appears:

(1) Check number

(2) Go to pallet with matching numbers and repeat set-up steps

II. JOB TITLE: Jig Mover

A. Prerequisites

1. Ability to walk.

2. Ability to lift.

3. Ability to carry.

4. Ability to grasp.

5. Ability to place jig on conveyor belt so it does not fall off.

B. Task

1. Remove empty jig from end of assembly line.

2. Carry it to conveyor.

3. Place on conveyor (to be sent to the other end of the room) so it does not fall off.

4. Remove jig from conveyor.

5. Carry it to assembly conveyor.

6. Place it on conveyor when it is needed.

III. JOB TITLE: Marrier

A. Prerequisites

1. Ability to use at least one arm and hand.

2. Ability to grasp.

3. Neatness.

4. Ability to see is not necessary as long as pre-loader is capable of placing correct sheets at station and periodic checks are made on sheet sequence.

5. If marrier has normal vision:

a. Ability to read.

b. Ability to match numbers.

B. Task

1. Pick up appropriate pile of printed sheets and place on a slow-moving jig.

2. Pick up second pile and place on same jig on top of first.

3. Place in correct order and do not duplicate.

IV. JOB TITLE: Weigher

A. Prerequisites

1. Ability to lift.

2. Ability to grasp.

3. Ability to place sheets on scale.

4. Ability to read weight scale.

5. Ability to recognize weight discrepancy.

B. Task

1. Lift off completed sheets.

2. Place sheets on scale.

3. Weight sheets.

4. If correct, hand to jogger.

5. If it weighs too much or too little, give it to checker.

6. Recheck corrected sheets.

V. JOB TITLE: Checker

A. Prerequisites

1. Fine dexterity.

2. Ability to read.

3. Ability to recognize numbers.

B. Task

1. Receive sheets to be corrected.

2. Check each section for additions or deletion.

3. Find error.

4. Go to appropriate pallet and get new addition.

5. Take extra work out.

6. Give to weigher to be checked.

VI. JOB TITLE: Jogger

A. Prerequisites

1. Ability to lift.

2. Ability to grasp.

3. Ability to hold paper while it is on jogger.

4. Ability to turn sheets.

5. Ability to recognize even piles.

B. Task

1. Turn on jogger.

2. Grasp weighed pile.

3. Stand it on end.

4. Place on jogger.

5. Move constantly on end.

6. Turn to side.

7. Move constantly until even.

8. Place on pallet.

VII. JOB TITLE: Cutting Jogger

A. Prerequisites

1. Ability to grasp.

2. Ability to lift.

3. Ability to recognize complete packet which may necessitate reading and numerical ability.

B. Task

1. Remove packet from pallet.

2. Check for completeness.

3. Place packet onto jogger.

4. Turn on jogger.

5. Remove neat packet from jogger.

6. Give it to cutter.

VIII. JOB TITLE: Cutter

A. Prerequisites

1. Visual acuity.

2. Fine finger/hand dexterity.

3. Neatness.

4. Ability to grasp.

5. Safety awareness.

B. Task

1. Pick up complete packet.

2. Place longest edge against cutter.

3. Straighten packet until no loose edges are visible.

4. Operate cutter -- push two buttons simultaneously using both hands.

5. Align packets and cut again.

6. Place short ends against cutting edge, align pockets and cut.

7. Repeat step No. 6 two more times.

8. Remove individual packets and stack in alternating fashion.

IX. JOB TITLE: Shrink Wrap Loader

A. Prerequisites

1. Ability to grasp.

2. Ability to lift.

3. Ability to work at same rate as machine.

4. Good eye-hand coordination.

5. Neatness.

6. Ability to perceive correct thickness.

B. Task

1. Take packet from side panel.

2. Straighten out packet until it is even.

3. Place in slot on conveyor belt.

X. JOB TITLE: Packer

A. Prerequisites

1. Ability to grasp.

2. Ability to work at same rate as machine.

3. Ability to perceive correct packaging.

4. Ability to perceive neatness of wrap.

5. Ability to recognize cue when box is full (50 packets fill box).

6. Ability to stack packets correctly in box.

7. Ability to lift.

8. Ability to carry.

9. If unable to carry, one must have the ability to call for someone to remove completed box.

B. Task

1. Remove wrapped packets from conveyor belt.

2. Check quality of wrapping.

3. Place properly in box.

4. Remove full box to next area.

5. Place empty box on jig and begin cycle.

XI: JOB TITLE: Stapler

A. Prerequisites

1. Ability to grasp.

2. Ability to lift (30-lb. filled box).

3. Ability to fold and bend boxes.

4. Visual acuity.

5. Ability to operate pnuematic staple gun.

6. Fine motor ability.

7. Hand strength.

B. Task

1. Phase I

a. Pick up flat box.

b. Unfold it.

c. Bind flaps to proper decision.

d. Staple bottom flaps.

e. Stack completed boxes near packer (2 staples at each end).

2. Phase II

a. Lift filled box onto table.

b. Place cardboard insert in each corner.

c. Bind flaps and close box.

d. Staple box with two staples at each end.

e. Place completed box on pallet, following established pattern.

XII. JOB TITLE: Materials Handler

A. Prerequisites

1. Ability to lift.

2. Ability to walk.

3. Ability to carry.

4. Ability to stoop.

5. Ability to judge.

6. Ability to operate floor jack.

7. Manual dexterity.

B. Task

1. Use floor jack to move pallets.

2. Supply each department.

3. Move finished products.

ADDITIONAL EXAMPLES OF VOCATIONAL TRAINING

The following occupations and the vocational, trade, or industrial areas in which they are included are presented as being worthy of exploration in prevocational and vocational training for the handicapped. Although the workshop participants were not activity involved in these additional areas, the students who prepared these task analyses are those who have experienced success in helping handicapped youth in the development of vocational skills in these additional areas. Success in each case was measured by the handicapped individual's attainment of a job in competitive employment and through ongoing evaluation of the employee's performance on the job and adjustment to the setting.

As in the previous task analyses, only one specific operation was analyzed for purposes of illustration.

Job Title: Power Sewing Machine Operator (Single Needle Lock Stitch -- SNLS)

Job Description: Given a single needle lockstitch machine, the operator will be able to perform all operations necessary to complete the assigned task.

Tasks Involved:

Ability to:

1. identify the proper machine parts
2. adjust the chair
3. position self in proper posture

4. position feet and hands properly

5. use the knee lift to lift the lever and then adjust the material with hands

6. identify the correct needle for the SNLS

7. choose the correct screwdriver necessary to change the needle

*8. change the needle (analysis follows)

9. control speed of machine

10. stop machine at proper point

11. sew straight lines without threading the SNLS

12. sew broken lines without threading the SNLS

13. sew corners without threading the SNLS

14. sew curved lines without threading the SNLS

15. backtrack without threading the SNLS

16. choose the proper thread for the SNLS

17. thread the head properly

18. choose a properly wound bobbin

19. thread bobbin case

20. place bobbin case in the proper position

21. pull bobbin thread up

22. wind bobbin

23. sew straight lines with a threaded SNLS

24. sew broken lines with a threaded SNLS

25. sew corners with a threaded SNLS

26. sew curved lines with a threaded SNLS

27. backtrack with a threaded SNLS

28. adjust top tension

29. adjust bottom tension

30. recognize improper stitches

31. hold scissors correctly

32. use scissors to cut thread

33. remove material from machine

34. get material to be sewn

35. dispose sewn material

36. lift machine head and push it back to a resting position

37. see need for addition of oil

38. clean machine properly

39. leave machine in ready position

40. observe all safety regulations

Prerequisites:

A. Academic

1. ability to match thread and bobbin color

2. ability to match needle numbers

3. ability to name machine parts

4. ability to name needle parts

B. Physical

1. ability to sit straight

2. ability to sit long periods of time

3. ability to use one hand

4. ability to use feet and knee

5. good dexterity

6. speed

C. Social

1. ability to relate to supervisor any need; i.e., broken machine, completion of work, etc.

*Job Description: Given a single needle lockstitch machine, the student will be able to change the needle with 100 per cent accuracy within one minute.

Tasks Involved:

1. turn machine off

2. raise needle to highest position -- turn handwheel

3. choose correct screwdriver to fit screw in needle bar

4. turn screw in needle bar while holding needle with free hand

5. once screw is loose remove needle

6. check needle size -- on shank

7. choose proper replacement

8. distinguish long groove from short groove

9. hold needle so long groove is turned to the left of the machine

10. put needle into needle bar

11. hold it there and begin to tighten screw

12. once tightly in place, check to see that needle is in sideways with the longest groove facing the left

13. turn the handwheel several times to be sure needle is positioned correctly and does not hit the presser foot or throat plate

14. put screwdriver away

15. rethread needle

16. turn machine on and sew

* *

Job Title: Offset Printing

A. Preparation of Copy

1. composition of type, etc.

2. pasteup of copy to be printed

B. Photographing Copy

1. darkroom procedures

*2. exposing copy to films (task analysis follows)

3. developing exposed film

C. Stripping Negative into Special "Goldenrod" Stock

1. determine margins -- draw guidelines

2. fix negative to goldenrod

3. cut "windows" and opaque

D. Making an Offset Plate

1. exposing the plate

2. desensitizing the plate

3. developing the plate

E. Printing Copy on an Offset Press

1. inking the press

2. set up the feed mechanism (load paper)

3. transfer copy to blanket cylinder

4. pull a proof of copy on paper

5. make any necessary adjustments

   a. change position of copy regarding top and side margins

   b. balance flow of ink and water

6. reproduce copies

*Task Analysis

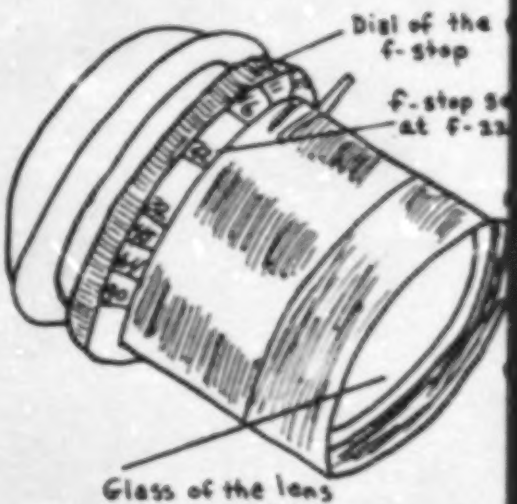
Trade: Offset Printing

Task: How to expose the film in the camera

Aim: Learning all steps necessary to make an exposure in the camera

Steps:

1. Load the camera with film.
2. Load the copyboard with artwork.
3. Turn a main powerswitch located at the back of the camera to on position.
4. Set the dials of lens and copyboard so both dials read 1000. This insures a 100 per cent or "same size" exposure of the image area.
5. Set the F-stop on the lens at F-22.
6. Remove the lens cap from the lens.
7. Remove metal slide from the cameraback.
8. Set the timer on the camera for a 22 second exposure.
9. Turn the timer switch to the "timer" position.



10. Engage the push button switch which opens the lens and turns on the lights. During this time, the exposure is actually being made.

11. When lights go off, the exposure has been made. Immediately replace metal slide in the cameraback.

12. Turn off "timer" switch and main switch of the camera.

13. Replace lens cap.

Precautions:

1. Turn the dials of the copyboard and camera slowly; turning too fast may break the cable connecting mechanism of the dial with the focusing mechanism of the camera.

2. Make sure the glass cover of the copyboard is clean and free from dust; this may cause pin points in the negative and a ruined image area.

3. Be sure not to touch the lens of the camera when removing the lens cap.

Questions:

1. What may happen if the film is exposed too long in the camera?

2. What happens when changing the F-stop setting of the lens from F-16 to F-22? Should the time of exposure also change? Why?

* *

Job Title: Child Care Assistant

Job Description: One who performs specific functions with a nursery school or day care center or baby sitting under specific supervision.

I. Baby Sitting Skills Necessary

A. Feed child

B. Play with child

C. Perform simple grooming chores connected with

child (wash dirt, finger paints, etc. from child's face and hands; dry same gently)

*D. Knows how to handle sickness of child (task analysis follows -- taking of temperature)

E. Knows how to handle emergency situations and secure appropriate help

1. contact parent

2. call doctor

3. call police

4. call firemen

F. Put child to bed

II. Nursery School and/or Day Care Center

A. Help children with arrival chores: removing clothes, boots, etc. and place in child's own locker

B. Assist in preparation of activity materials for day's schedule

C. Does simple housekeeping, clean-up chores

D. Assist child in proper dress for playground

E. Watch child on playground

F. Assist with lunch service and clean up

G. Assist child with dress to go home

*Task Analysis

Job Title: Taking the Temperature

Objective: The client will take the body temperature of a child by mouth, using an oral Fahrenheit scale thermometer

Tasks:

1. Explain to the child what is to be done

2. Have the child sit or lie down

3. Use an oral thermometer having a long slender bulb

4. Shake the mercury down to 95°F or below

   a. hold the thermometer by the top with the thumb and first two fingers

   b. shake the mercury down by snapping the wrist sharply as though one were trying to shake water off the hand

5. Give the child instructions for holding the thermometer in his mouth

   a. keep his lips closed

   b. breathe through his nose

   c. do not bite down on the thermometer

   d. do not talk

   e. do not cry

   f. do not touch the thermometer

   g. do not remove the thermometer

6. Moisten the thermometer with clear, cool water

7. Place the bulb in the child's mouth, well under the tongue and a little to one side

8. Leave the thermometer in place for three minutes

9. Remove the thermometer, holding it securely at the top

10. Remove saliva from the thermometer

    a. use a dry wipe

    b. use a firm rotary stroke from the top downward over the bulb

    c. discard the wipe

11. Take the thermometer to a good light and read the temperature

Objective: The client will learn to read a clinical Fahrenheit scale thermometer

Tasks:

1. Identify the two kinds of clinical thermometers: oral and rectal
2. Identify the parts of a clinical thermometer: bulb end, the bubble, the scale and ridge, the arrow, the mercury column, and the top end
3. Know the long lines designate degrees and the short lines designate two-tenths of a degree
4. Know the degree lines appear above the numbers
5. Read the numbered long lines on the thermometer as 94^{o}, 96^{o}, 100^{o}
6. Read the 8 following 96^{o} as 98 degrees
7. Read the 2, 4, and 6 following 100 as 102^{o}, 104^{o}, and 106^{o}
8. Read the long lines between two even numbers as an odd number which is to be read in the correct sequence, 102^{o}, 103^{o}, 104^{o}, 105^{o}
9. Read the short lines to the nearest two-tenths of a degree or by two's, or 98.2^{o}, 98.4^{o}, 98.6^{o}
10. Identify the front of the thermometer because it is ridged to magnify the mercury column in the glass tube
11. Identify the back of the thermometer because it is made of opaque glass so that the mercury will be easier to see
12. Hold the thermometer by the top, the end opposite to the bulb
13. Hold the thermometer in the right hand, horizontally, and read it with the bulb pointing to the left of the person holding it
14. Locate the small arrow on the tube which indicates the normal mouth temperature, which is 98.6^{o}
15. Locate the clear bubble just above the bulb at the constriction in the thermometer

16. Rotate the thermometer slowly until the bubble can be seen at its widest point

17. Look to the right of the bubble and locate the mercury which will be seen as a silver ribbon in the glass tube

18. Read the thermometer or scale to include the degree and the nearest two-tenths of a degree

19. Record the temperature

    a. record the temperature on paper

    b. record the time

    c. record the temperature to include the degree and nearest two-tenths of a degree

20. Cleanse the thermometer

    a. moisten a wipe with cool water and soap it well

    b. hold the instrument by the top, with the bulb down, over a waste container

    c. beginning at the top, wipe down with a firm, rotary motion, using friction and getting well into the grooves of the tube and over the bulb

    d. discard the wipe

    e. moisten a fresh wipe with clear, cool water

    f. rinse the thermometer, using the same downward rotary motion

    g. soap the thermometer again

    h. rinse the thermometer again

    i. dry it with a fresh wipe, using the same motion

21. Put the thermometer away in its case, bulb end first

Objective: The client will take the body temperature of a child by rectum, using a rectal Fahrenheit scale thermometer

Tasks:

1. Explain to an older child what is going to be done
2. Use a rectal thermometer, having a short round bulb or a stubby bulb
3. Shake the mercury down to or below 95°F
4. Lubricate the bulb end of the thermometer with the petrolatum, oil, or cold cream
5. Place the child on a bed or a table
6. Lay child on his side or his abdomen so that the anus is visible
7. Place an infant on his back on your lap or put him on a bed, a bathinette, or a table
8. Grasp his ankles with one hand and gently bend his knees so that the anus is visible
9. Insert the thermometer into the rectum
   a. insert the bulb of the thermometer into the rectum
   b. insert the thermometer about one inch into the rectum
   c. hold the thermometer in place for three minutes
   d. if needed, have help to hold a restless child
10. Remove the thermometer, holding it securely at the top
11. Remove lubricant from the thermometer
12. Take the thermometer to a good light and read the temperature
13. Record the temperature, noting it had been taken rectally

14. Cleanse the thermometer

15. Put the thermometer away in its case, bulb end first

Objective: The client will take the temperature of a child at the axilla, or armpit, using an oral Fahrenheit scale thermometer

Tasks:

1. Explain to the child what is going to be done

2. Use an oral thermometer

3. Shake the mercury down to 95°F

4. Do not moisten or lubricate the thermometer

5. Dry the area under the arm

6. Place the thermometer in the axilla or armpit

   a. place the dry bulb end of the thermometer in the axilla

   b. have the child press his arm firmly against his body

   c. put his hand on his opposite shoulder and hold the thermometer in this position

   d. hold the thermometer in place for five minutes

7. Remove the thermometer, holding it securely at the top

8. Take the thermometer to a good light and read the temperature

9. Record the temperature, noting that an axillary temperature had been taken

10. Cleanse the thermometer

11. Put the thermometer away in its case, bulb end first

Prerequisites:

1. Knows a clinical thermometer is used to take body temperature
2. Knows a rise in temperature is a fever or sign of illness
3. Knows an average mouth temperature of a well person is 98.6 degrees
4. Knows the average normal rectal temperature is 99.6°F, one degree higher than the mouth temperature
5. Knows the average axillary temperature is 97.6°F, one degree lower than the mouth temperature
6. Knows an individual's average temperature may vary by as much as one degree above or below the normal average temperature
7. Reads a thermometer in degrees
8. Reads a weather thermometer
9. Knows clinical thermometers use a centigrade or Fahrenheit scale
10. Understands the following terms: temperature, thermometer, Fahrenheit, centigrade, degrees, scale, mercury, column, top end, bubble, bulb end, rectum, anus, petrolatum, lubricate, oral, axilla, axillary, armpit
11. Visual acuity and discrimination
12. Visual perception
13. Eye-hand coordination
14. Fine finger and hand dexterity
15. Judgment and decison-making abilities
16. Numerical recognition
17. Can count by two's

Adaptations:

1. If unable to find mercury, buy a flat thermometer or one with a red colored mercury

2. Convert a centigrade reading to a Fahrenheit reading: multiply the centigrade reading by 9, divide by 5, and add 32.

3. Convert a Fahrenheit reading to a centigrade reading: subtract 32 from the Fahrenheit reading, multiply by 5 and divide by 9.

Information Source:

Home Nursing Textbook
(Home Nursing Programmed Instruction, Student's Manual, and Home Nursing Instructor's Guide)

THE AMERICAN NATIONAL RED CROSS
Nursing Services
New York, New York

DOUBLEDAY AND COMPANY, INC.
New York, New York

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Job Title: Food Service Worker

Job Description: One who performs specific functions within a short order food preparation, such as a coffee shop, infra-red commissary, cafeteria, or industrial food service

Prerequisites:

A. Equipment

1. Coffee maker--single cup, pot brewer, urn

2. Refrigerator/freezer differentiation

*3. Dishwasher operation (task analysis follows)

4. Microwave/infra-red oven

5. Operation of range--electric or gas

6. Operation of grill

B. Sanitation Skills

1. Kitchen

2. Dining room or area

3. Floor maintenance

C. Sub-jobs Under Food Service

1. Cashier

2. Waitress or order taker

3. Soup, salad, dessert portioner or plater

4. Sandwich assembler in production line

5. Food preparation

a. baker's assistant -- pan preparation person or benchworker

b. salad preparation assistant

c. dessert preparation assistant

*Task Analysis

Job Description: Dishwasher

A. Preliminary Sorting

1. Silverware

2. Glassware

3. Types of dishes

a. bread and butter plates

b. saucers

c. dinner plates

4. Bowls

5. Cups

6. Pots and Pans

B. Racking

C. Measuring of Detergent

D. Starting Machine

E. Following the above steps could easily apply to a large flight type dishwasher operation

NOTE: All jobs listed could be incorporated into a large food service operation, restaurant, production line, cafeteria, etc.

REFERENCES

Much of the information contained in this book was adapted from conferences between the students and the professional personnel of Parc-Way Industries and the Easter Seal Society. In addition, the following sources were consulted and might be of interest and help to others pursuing information about vocational education for the handicapped:

Agencies

National Association for Retarded Citizens
2709 Avenue E., East
Arlington, Texas 76011

Pennsylvania Association for Retarded Citizens
1500 North Second Street
Harrisburg, Pennsylvania 17101

National Easter Seal Society for Crippled Children and Adults
2023 West Ogden Avenue
Chicago, Illinois 60612

Allegheny County Chapter - PARC
917 Brighton Road
Pittsburgh, Pennsylvania 15233

Easter Seal Society for Crippled Children and Adults
110 Seventh Street
Pittsburgh, Pennsylvania 15222

(Other local chapters of NARC and the Easter Seal Society may be found by consulting telephone directories)

Literature

NARC-OJT Project. *People and Jobs: An Organized Approach to Placement Services*

The President's Committee on Employment of the Handicapped, 1111 Twentieth Street, Washington, D. C. 20210:

1. About Jobs and Mentally Retarded People

2. Affirmative Action to Employ Handicapped People

The Dr. Gertrude A. Barber Center, Inc., 136 East Avenue, Erie, Pennsylvania 16507

The Developmental Assessment of Life Experiences System: An Inventory to Assess Competencies in Community Living

Consultants

Wayne L. Grubb, Consultant
Disadvantaged and Handicapped Programs
Bureau of Vocational, Technical and Continuing Education
DEPARTMENT OF EDUCATION
Harrisburg, Pennsylvania 17126

Jeffrey N. Grotsky
Special Education Advisor
Bureau of Special Education
DEPARTMENT OF EDUCATION
Harrisburg, Pennsylvania 17126

Alvin Sheetz
Supervisor of Special Education
Intermediate Unit No. 01
1148 Wood Street
California, Pennsylvania 15419

Charles Cagno
Supervisor, OVT and Post-Graduate Programs
Intermediate Unit No. 03
Suite 1300
Two Allegheny Center
Pittsburgh, Pennsylvania 15212